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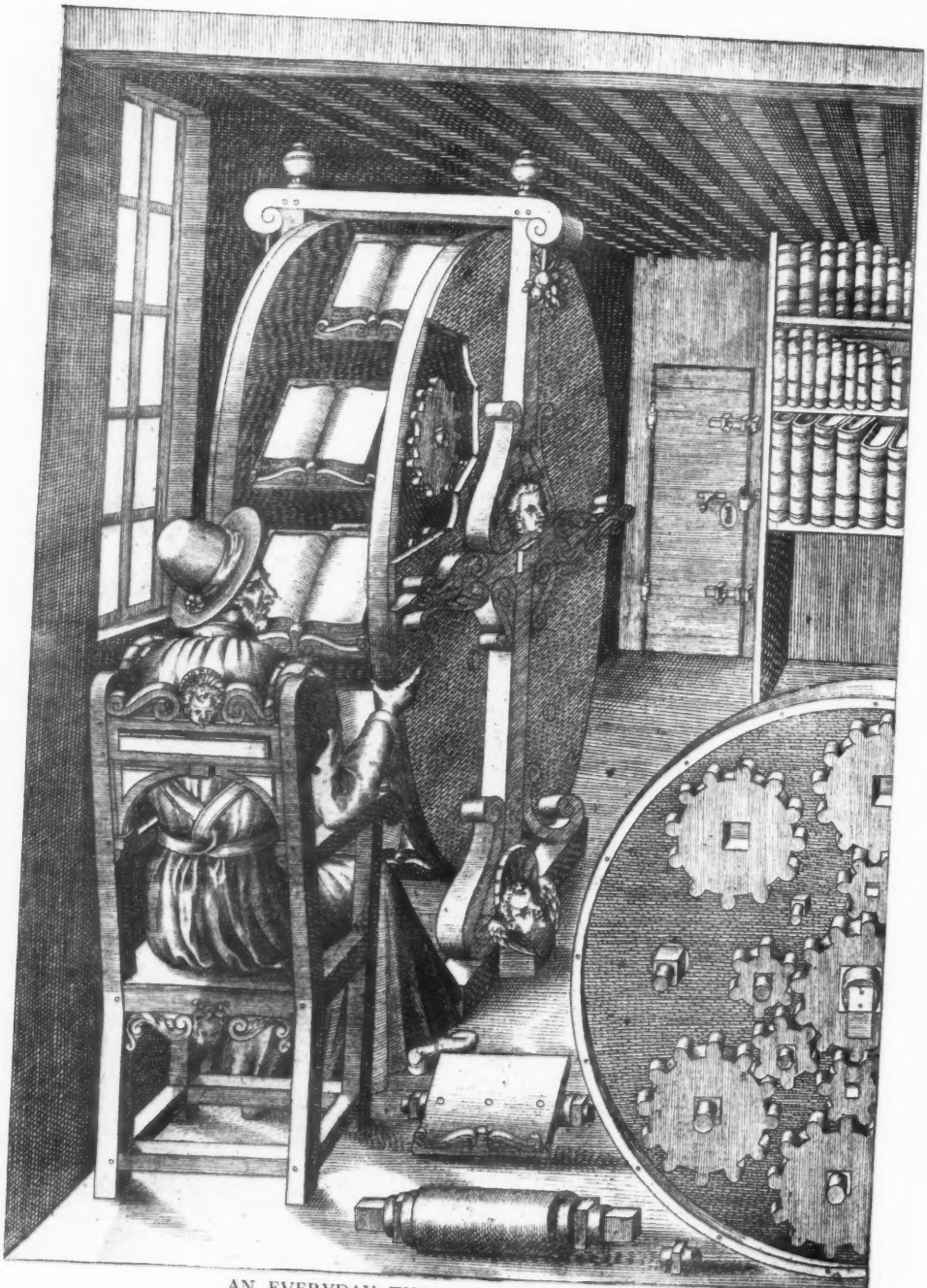
CONTENTS FOR 22 FEBRUARY 1936



AN EVERYDAY THING IN ANOTHER AGE
From Agostino Ramelli. *Le Diverse et Artificiose Machine*, 1588

JOURNAL OF THE
ROYAL INSTITUTE *of* BRITISH ARCHITECTS

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Journal

EVERYDAY THINGS

The Exhibition of Everyday Things was opened on Wednesday last by the Earl of Bessborough. Perhaps the largest gathering that there has ever been at the R.I.B.A. for an occasion of the sort was there to give the exhibition an excellent send-off. Literally a "send-off" because this exhibition, as probably every member knows, is not simply a local London affair which may be read about but not seen by architects and others in the provinces, but is to go on tour. There are many simple and good objectives which the Exhibition Committee have set themselves to achieve, but not the least important is this desire to make the exhibition a touring show. Bristol, Hull, Liverpool, Manchester and Leicester have all booked it and probably it will eventually go much farther afield. If it is to do so the co-operation of architects outside London will be absolutely necessary. First to encourage their local museum or gallery authorities to take it and then, if they are successful, to give practical help by drawing public attention to it and assisting with the hundred and one duties which an exhibition demands of its supporters.

So often when we in London write of events that take place in London we are aware that what we say can never really interest those out of London because, however central London may be, it is beyond the normal ambit of life in cities and towns in the West and North of the country. This event is however something of wider appeal and we are glad to be able to write of it as such.

As for the substance of the show itself, most members of the Institute know probably something at least about it. It is a venture in a way outside the normal programme of the Exhibition Committee, whose regular work is to maintain a large collection of photographs of modern architecture and to stage regular exhibitions here in London and elsewhere. But there is no doubt that in tackling this extra and self-imposed duty the Committee have shown wisdom and a real sense of the need of the moment. Lord Bessborough in his opening speech referred to the fortunate coincidence of the R.I.B.A. exhibition and the British Industries Fair. We can hope that many of those now in London for the Fair will come here and see how excellently this much smaller show has been staged and what good things there are in it, and that, if they see it, more industrialists than normally have contacts with the architectural profession will be brought to realise the interest of the profession in industrial products.

The space available in the R.I.B.A. and the space likely to be available in provincial galleries has naturally restricted the amount that could be shown, but, as with writing and speaking (we speak as old offenders), space limitation is a most salutary thing. Here the yard-sticks of price and quality have been applied as rigorously as possible so that anyone visiting the exhibition is not bewildered by the conjunction of objects, some fit only for millionaires, others only for the penniless.

One of the most remarkable things that appears in such a show as this is that things ostensibly designed and priced for the ordinary middle-class household are by the quality of their finish and the beauty of their design fitted as much for the Park Lane household.

It is part of the common merging of taste which is one of the happiest signs of life to-day. The rich man is not required to have an entirely different outlook of art and life to the poor man. The poor man's gas-cooker must work just as much as the rich man's, and if it is designed well will work well and look right ; beer-mugs can be as lovely as wine-glasses.

In his foreword to the catalogue the President has referred to this "rightness" which comes from a proper relationship between appearance and use and has suggested that the demand for this has come not from the dominating influence of artistic cliques and æsthetic theorising but just because that is what people want. We know that unfortunately it is true that, in its most literal meaning, many people do not *want* things that conform to this standard of rightness, but that is generally because they don't know what they do want, unless it is something like what the Joneses next door have ; and, too, the mass of the buyers, both wholesale and retail, are still apt to think that simple and cheap things represent the lowest level and that the elaboration

of tassels and zig-zag patterns represents "quality." We may be forced in reaction from this to be too fond of simplicity for its own sake but the return to it from the elaborations of our fathers is necessary now.

Perhaps this exhibition combines the best of both worlds by giving them what they want, and at the same time educating them to higher things.

Lectures at the Exhibition

Two special public lectures are to be given during the run of the Exhibition. Mr. Frank Pick is to speak on "The Educational Aspect of Design" on Wednesday, 26 February, at 6 p.m. Mr. Pick is specially qualified for this task because he is Chairman of the Council of Art in Industry. The recommendations of the Council regarding art education made in a recent report have somewhat fluttered educational circles. Mr. Pick is perhaps even more qualified because it is under his direction that that everyday thing the London transport system has become so great an exemplar of what this Exhibition is seeking to demonstrate.

The second lecture is to be given by Sir Eric Maclagan, C.B.E., F.S.A., on Tuesday, 10 March. As Director of the Victoria and Albert Museum Sir Eric is the leading authority on the history and continuity of everyday things. Though these are public lectures, members who can attend would be well advised not to miss them because they will certainly be informative, interesting and well delivered.

Bossom Reports

The leading articles in this Journal are two of the Bossom Studentship reports and designs. The subject was one of wide interest and the solutions were of a high standard. They are published because in themselves they should appeal to most members, also because it is valuable to show what quality of work can be produced by entrants for the R.I.B.A. prizes.

Architecture Medals

When the London Architecture Medal award was first made in 1922 few people probably realised how widely the idea would spread. Now, in addition to the London medal, there are thirteen other local medals awarded, seven through English allied societies, one in Scotland, one in South Wales, one in Northarn Ireland and two in Australia and one in New Zealand. An interesting addition has now been made to the list introducing a new and important variation. All the hitherto existing medals have been awarded through the local allied societies; in Malta, where this new award is to be made, the diploma given to the successful architect is to be presented by the Government of the Island. The Institute has received a letter from the Secretary to the Government of Malta thanking the R.I.B.A. for their help and stating that the award is to be inaugurated forthwith. In general, the conditions, except for the notable fact of its official sponsorship, are based on the London award. A diploma and an honorarium of £20 are to be given annually for a building erected in the Islands of Malta and Gozo during the three years preceding the 1 January of each year which, in the opinion of a jury appointed by the Governor, shall be deemed to be æsthetically the best of the buildings examined and of exceptional merit. The only buildings excepted from the award are those erected by the Public Works Department and His Majesty's Services. We have reason to be grateful to the Government of the Island for their enthusiastic adoption of this proved method of stimulating good architectural design and will await the first award eagerly.

The Royal Fine Art Commission

The King has appointed Professor Patrick Abercrombie [*F.*] to be a member of the Royal Fine Art Commission in succession to Mr. Arthur J. Davis, A.R.A. [*F.*], who has retired on completion of his term of office. Lord Lee of Fareham has been reappointed as a member of the Commission [*Hon. F.*]

Preservation and Foresight

The Society for the Protection of Ancient Buildings has recently issued a resolution regretting the destruction of certain old houses in "The Bailey," Durham, an old residential street in which additions are to be built to St. Chad's College. Its action serves to emphasise how important it is that the owners of property which has a worthy traditional use and character should be made aware that such traditional use and character are national possessions to be retained wherever possible. While sometimes it is necessary to change use and thereby to destroy the inherent character of old streets, too few remain for their passing to be regarded with anything but regret. There have been several notable cases in recent years, and it is evident that more and more landowners are becoming aware of their responsibilities. It is one of the duties of the S.P.A.B. to hold a watching brief, but the power at their elbow would be vastly increased if they and other societies and individuals who have these things at heart could try to forestall destruction, not only by entering in after what are often irrevocable and perhaps inevitable decisions have been taken, but by a general policy of propaganda to make landowners aware of the national character of their trusts.

This particular S.P.A.B. resolution gives a clear indication that they realise this, and as such will meet with general approval.

SLUM CLEARANCE

TWO OF THE SCHEMES SUBMITTED FOR THE BOSSOM TRAVELLING STUDENTSHIP, 1935-36

THE WINNING DESIGN AND REPORT BY ROBERT H. MATTHEW [*A.*]

PRELIMINARY

Before this subject was undertaken, a tour was made of slum areas in London, Leeds, Liverpool, Manchester and Edinburgh, and many new clearance schemes were visited, carried out both by local authorities and housing associations.

While variations in the details of the problem occur from place to place, the essence of the matter is always the same—mean congested areas housing a crowded population in insanitary and uninspiring conditions from which there can be no escape. Many partial solutions have been attempted, but in the last resort a large percentage of town dwellers must be rehoused near the centre of existing towns as long as their place of work remains there. From examinations of many schemes in the centre of towns, one grave fault seemed to be common to nearly them all—the size of the scheme was too small. Existing street lines are thus preserved for many years longer than is desirable ; individual blocks are isolated and bear no relation to each other, and no perceptible amelioration of district can take place. Added to that the average scheme is too small to permit of the provision of any communal facilities, and it may be seen that while a great deal is being done for many families up to a point, this new building may actually be a possible hindrance to improvement in any really wide sense in the immediate future.

While, therefore, this subject is welcomed as a proper approach to the problem of clearing a slum area, information on many of the necessary points taken from actual experience has been difficult to

procure. It has been decided, for instance, that to get the maximum from the site from all points of view a height of 10 storeys is desirable ; no building of this height and nature has, however, been erected.

THE SCHEME

" Competitors are urged to acquaint themselves with the fullest details of the conditions of life in the slums before attempting a solution."

Preliminary Enquiry.—First, an inquiry was made into a typical slum area, in the St. Leonard's Ward in Edinburgh. This Ward has a density of over 150 persons per acre, as compared with under 5 per acre in the suburbs. The development is mostly 4 and 5 storey tenements, from 100 to 200 years old, many of which have been condemned. A clearance scheme by the Corporation of Edinburgh of about 3 acres is in progress just now, involving the building of 119 flats on a site that previously housed over 450 families. The surplus, therefore, is housed on the outskirts of the town—involving a weekly fare, for those who work in the heart of the town, of anything from 2s. to 5s., with the added cost of a mid-day meal away from home. This clearance area is a small one taking the slum area as a whole, but is the largest in Edinburgh. A small nursery school is to be provided, but apart from that no communal facilities. In the area is a public wash-house opened in 1909, containing 56 tubs, the receipts of which show a full working load. There is also a clinic and dispensary, hospital, a church and university settlement, and nearby a park with bowling-green. The steep streets, built high with tenements, stop suddenly on the edge of the King's Park, with the towering crags seen above the roofs and between blocks forming an almost remote background to the huddled and sordid conditions of St. Leonard's.

A typical tenement was visited, by the courtesy of the sanitary department. The street is called Prospect Street, although the dominant feature is a dump 30 ft. high, on the eye level at the third storey, so great is the slope of the ground. This tenement of five storeys has one common stair, originally one or two houses opened off the stair on each landing, now, with subdivision, there are five and six houses to a floor, mainly of two rooms and " Single Ends." Many of these houses bore the blue enamel police labels—old ticketed houses, but still inhabited. The gable was a ragged composition of chimney breasts, gaping in mid-air, apparently standing on nothing, and ancient wallpapers of many patterns, hanging in shreds from bulging walls. The street façade was, in places, practically open jointed, and a gutter dripped over the pavement, although the day was dry. The common stair had a window on each half-landing—void of glass (perhaps a mercy all things considered) and commanding a view of the dump mentioned above and a few square yards of mud, literally sprinkled with tin cans and variegated rubbish.

At each floor, opening directly off the stair well, is the " common landing." This space, with one window (no glass), about 12 ft. × 12 ft., contains two w.c.s enclosed by unstable partitions of wood lining, with doors, ill-fitting and devoid of fastenings, also one iron sink beneath the window, fed by a cold tap. The floor was cement, the ceiling showed rotting and soaking beams The smell, which had been moderately foul on the stairway, was here at its maximum—a penetrating and nauseating mixture of age, damp, drains and cats. For a non-slum dweller of average stomach to stand on this landing for more than ten minutes or so would be exceedingly uncomfortable. The smell inside the houses was of a different kind. The " house," a subdivided part of what had once been a dwelling of reasonable size, opened usually off a dark unventilated corridor, a necessary introduction to reach all the separate units. A description of one will suffice. The living-room, about 12 ft. × 12 ft., contained a hot-fire (not a range), round which sat three children, small made and pallid. Three adults were also in the room, off which opened a small bedroom about 12 ft. × 9 ft. It seemed that about 50 per cent. of the floor space was covered by the beds and tables. Ornaments and texts, dishes and food littered every conceivable nook and cranny. There was no water in the house, and every drop had to be carried from the common landing. The bedroom wall above the bed was smeared, almost in a regular pattern, with small dark blotches, like the remains of dead flies. The bugs, coming up at night for food, were extinguished by the thumb, deft with experience, but not without leaving its legacy. The smell of the bug is peculiar, and lasting. For this accommodation, families of varying sizes paid anything from 3s. 6d. to 6s. per week. Landlords' repairs seemed to be nil from the appearance of gutters, walls, etc. This was one of the worst blocks in the area, but typical of many. The outside appearance of a tenement is very deceptive : well-built stone fronts can conceal the worst of conditions.

A detailed survey of about 1,500 families was made possible with the help of the Public Health Department of the Corporation, who had made a trial survey a year or two ago. The total population in the area under consideration is 5,496, consisting of 3,941 adults and 1,555 children. The number of separate families is 1,569, giving an average size of family of 3.5. The average rentals for houses similar to the above are :—

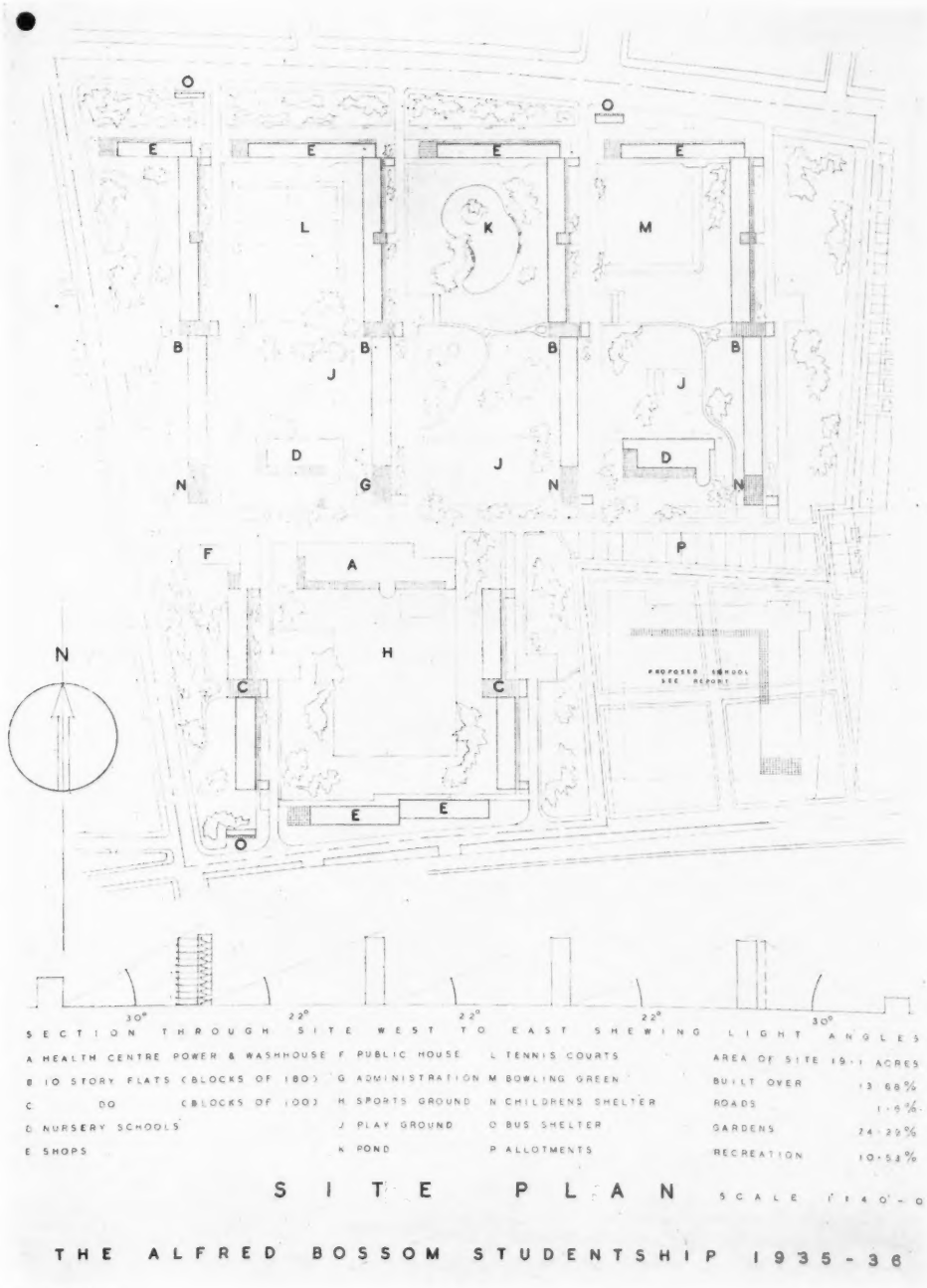
1s. 11d. to 5s. for single room. (Rents as high as 5s. 6d. are found in few cases.)

3s. 6d. to 7s. for two rooms.

6s. 6d. to 9s. 6d. for three rooms.

10s. to 12s. for four and five rooms.

The percentages of different sizes of families are given later, when the proposed scheme is considered.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PROPOSED SCHOOL SEE REPORT
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SECTION THROUGH SITE WEST TO EAST SHEWING LIGHT ANGLES
A HEALTH CENTRE POWER & WASHHOUSE
B 10 STORY FLATS (BLOCKS OF 180)
C DO (BLOCKS OF 100)
D NURSERY SCHOOLS
E SHOPS
F PUBLIC HOUSE
G ADMINISTRATION
H SPORTS GROUND
J PLAY GROUND
K POND
L TENNIS COURTS
M BOWLING GREEN
N CHILDRENS SHELTER
O BUS SHELTER
P ALLOTMENTS
AREA OF SITE 19·1 ACRES
BUILT OVER 13·68%
ROADS 1·9%
GARDENS 74·22%
RECREATION 10·58%
SITE PLAN
SCALE 1" = 40'-0"
THE ALFRED BOSSOM STUDENTSHIP 1935-36

R. H. Matthew—1

The occupations are summarised as follows :—

Artisans.	Factory Workers.	Labourers.	Housewives
98	180	535	277
	Shops and Offices.	Unclassified.	
	135	410	

There are 62 unemployed men and 97 old-age pensioners.

Some typical family budgets from the district, all of unemployed men, are as follows (from the Edinburgh Council of Social Service) :—

	s.	d.
Family :		
Man, Wife, and 2 Children		
Butcher's van man, when working per week ..	35	0
Receives from Public Assistance	29	3
Total	64	3
House Expenditure :		
Rent for one room per week	6	0
Coal for heating and cooking .. .. 2 8—3	0	
Food and clothing	19	6
Family :		
Man, Wife, and 3 Children under 10		
Receives from Public Assistance	32	0
House Expenditure :		
Rent	5	11
Electric light	1	0
Gas	0	1
Insurance	1	4
Coal	2	6
Food and clothing	21	6
Family :		
Man, Wife, and 4 Children under 10		
Receives from Unemployment Relief	34	0
House Expenditure :		
Rent	6	3
Insurance	2	0
Coal	3	0
Food and clothing	23	0
Family :		
Man, Wife and 2 Children (miner, unemployed for two years, came in from housing estate on outskirts as rent too expensive.		
Receives from Unemployment Relief	30	0
House Expenditure :		
Rent	5	2
Insurance	1	11
2 bags of coal	2	8

The following list gives some idea of the rate of wages current in the area.

Building trade skilled operatives working 44 hours per week at 1s. 6½d. per hour except between November and March, when hours are 2½ less. Has, therefore, weekly wage of £3 7s. 10d.

Labourers working at 1s. 2d. per hour receive per week a wage of £2 13s. 4d.

Brewery workers are highly paid and get from £3—£3 15s.

Miners wages vary from pit to pit, but on the whole are classed among the lower wage earners, after all payments for baths, explosives, etc., have been deducted at pit heads.

From information from the Edinburgh Council of Social Service, and the Health Department, the average wage-earning capacity of a family of 4 persons appears to vary from 35s. to 50s. in the St. Leonard's Ward, but, of course, this is a very uncertain figure, as no detailed survey has been made comparable to the Merseyside and London surveys. As seen from the above budgets families of four persons are subsisting on a weekly income of 30s., and old-age pensioners receive only 10s. per week. It is generally agreed by most workers in slum areas that a gross rent of 10s. per 3-room flat is the maximum possible : the capacity to pay this rent will vary, of course, with the individual family, and undoubtedly, with the passing of the Slum Clearance Act, many families will require some form of assistance to pay even this sum, compelled as they are to seek larger homes than they could possibly afford to pay for. The standard indicated by the above figure is shown by an example given in *London Life and Labour* for a family of 4 persons (2 children) with weekly income of 40s.

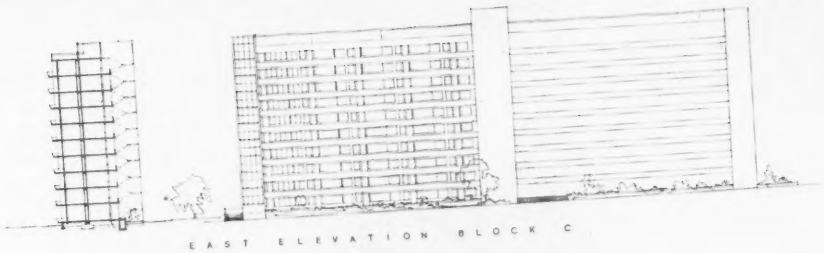
Man, Wife, and Children aged 10 and 4.
(Equivalent male adults 2.68)
Minimum Scale per Week.

	s	d.
Food : 7s. 1d. × 2.68	19	0
Clothing : Man	1	2
Woman	1	1
Children	1	11
Fuel	3	0
Household sundries	1	2
Insurance	1	4
Travelling	1	0
Rent, say	9	4
	39	0

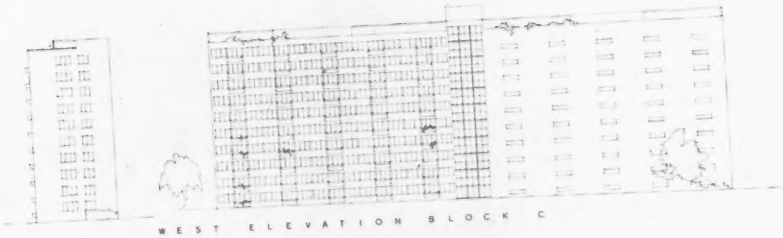
All the figures are an absolute minimum, and the food bill is allocated as follows :—

Hypothetical Weekly Budget.
Based partly on the budgets collected in 1904, but with many modifications.
Man, Wife, and 2 Children aged 10 and 4.

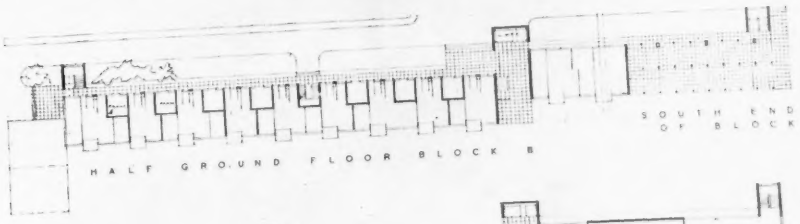
	Quantity	Price Pence.	Cost. s.	d.
Bread	14 lb.	2⅛ per lb.	2	5¾
Flour	7 lb.	2½ per lb.	1	5½
Rice	1 lb.	2½ per lb.	0	2½
Dried Peas	1 lb.	4¾ per lb.	0	4¾
Biscuits	2 lb.	9 per lb.	1	6
Bacon	¾ lb.	13 per lb.	0	9¾
Beef	2½ lb.	7¾ per lb.	1	7½
Mutton	1½ lb.	8½ per lb.	1	0¾
Sausages (beef) ..	2 lb.	6 per lb.	1	0
Lard or Suet	½ lb.	9 per lb.	0	4½
Butter	5 oz.	21 per lb.	0	6½
Margarine	1 lb.	6 per lb.	0	6
Milk : Fresh	6 pt.	6¼ per qt.	1	6¾
Tinned ..	1 lb.	8 per lb.	0	8
Cheese	10 oz.	13 per lb.	0	8
Sugar	3½ lb.	3 per lb.	0	10½
Jam	1 lb.	7 per lb.	0	7
Eggs	2	1¾ each	0	3½
Tea	7 oz.	24 per lb.	0	10½
Potatoes	9 lb.	1¼ per lb.	0	11¼



EAST ELEVATION BLOCK C



WEST ELEVATION BLOCK C



HALF GROUND FLOOR BLOCK B

SOUTH END OF BLOCK

ROOF PLAN

TYPICAL FLOOR BLOCK C

GROUND FLOOR BLOCK C

SIXTEENTH SCALE DETAILS OF FLATS

ALFRED BOSSOM STUDENTSHIP 1935–36

R. H. Matthew—2

	Quantity	Price Pence	Cost. s.	d.
Carrots	2 lb.	1½ per lb.	0	3
Cabbage	2 lb.	1 per lb.	0	2
Salt, etc.	—	—	0	2
			19	0

The rents of the flats on this scheme have, then, been calculated on this basis, with the full understanding that further assistance will have to be forthcoming in many cases.

THE PROPOSED SCHEME IN DETAIL

Site.—The factories and workshops, mentioned in the first paragraph of the general conditions, appear on the site plan to be outside the site boundary, except for one workshop. As these buildings are exceedingly important in a scheme of this kind, where the population must remain on the site during the whole of the re-housing operations, the whole question of site has had to be reconsidered. An actual site in London has been found, corresponding in almost every detail with the outline plan. As the plan supplied does not appear to agree with the conditions in this important respect the ordnance survey has been made the basis of the scheme. The total site is 19.1 acres, excluding the bounding roads, and this corresponds exactly with the outline plan. The factory sites and sheds existing on the site are taken as the only open spaces available, and the progress of the clearance has been controlled accordingly. The initial removal of about 30 houses has been considered necessary, in order to get the health centre into its proper relation to the scheme. It is recognised that, had this centre been placed to the extreme south of the site, this removal might have been avoided, but the advantage of its central position seemed to outweigh the removal. The total number of houses on the site appears to be just over 1,000, with the average family size of 4, and accepting the figure of 3,650 persons given in the conditions this would leave a surplus of about 100 empty houses on the site. The thirty families to be removed at the initial stage could, therefore, be housed on the site in existing vacant houses.

(*a*) Advantage has been taken of the size of the scheme to treat this clearance on a broad basis, with a view to the improvement of the area as a whole.

The main considerations in the choice of housing types have been :

(*a*) The provision of a higher standard of life for the individual, both within and without his house.

(*b*) A type of structure and a method of lay-out that will meet the above consideration in the best possible manner consonant with cheapness of first cost and subsequent maintenance. The area has been considered as a whole, and its inhabitants as a community within a community, with certain needs that should reasonably be met within the scheme itself, leaving others to be satisfied elsewhere.

(*b*) With a people under-nourished with generations of slum life, a health centre has been considered of prime importance, and has been made the focal point of the scheme. It has been combined with the central power and wash-house, with accommodation for small children on the lines of a crèche. Nursery schools have been provided for children from 2-5 years ; gardens have been spaciously laid out, with play spaces for children, sports ground for adolescents, bowling and tennis for adults. Shops are planned at the north and south ends of the site, and a public-house near the centre of the scheme ; individual gardens have not been considered advantageous, but a certain number of allotments have been allowed. The building units that go to make up the whole scheme are here described in detail.

Type of Housing.—It was immediately apparent that in a scheme of this nature great advantages lie in building upwards rather than in many blocks of four or five storeys.

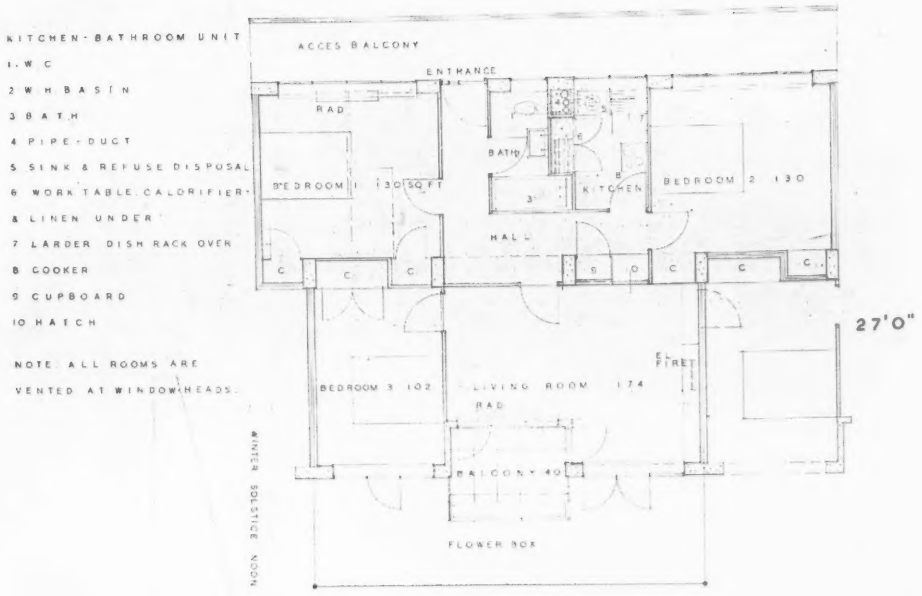
A five-storey block, which is popular with many local authorities, is really too high to reach without lifts. In Leeds this has already been recognised, and lifts are being installed in buildings of four floors and over, but once lifts are proposed a much greater height can be obtained at a more economic cost. From the graph it is seen that the amount of land freed for recreation, planting, etc., increases as buildings become higher, *keeping the same density and light angle*. This last proviso, is, of course, all-important, and is sometimes lost sight of. It was found possible to house the entire population of 3,650 persons in 6 blocks of 10 storeys, with an angle of light of 22 deg. from the base to the parapet of adjacent blocks. Obscuration plans were worked out for the scheme, and with a spacing of over 200 ft. buildings were only shadowed in the late evening.

With 10-storey blocks the progress of the entire job becomes very much simplified. The rehousing of the resident population can be made on three styles, as explained on the progress chart. From the number of houses on the site it is calculated that about 100 must be idle, and the initial transference of 30 houses can take advantage, temporarily, of these in order to build the health centre and power house.

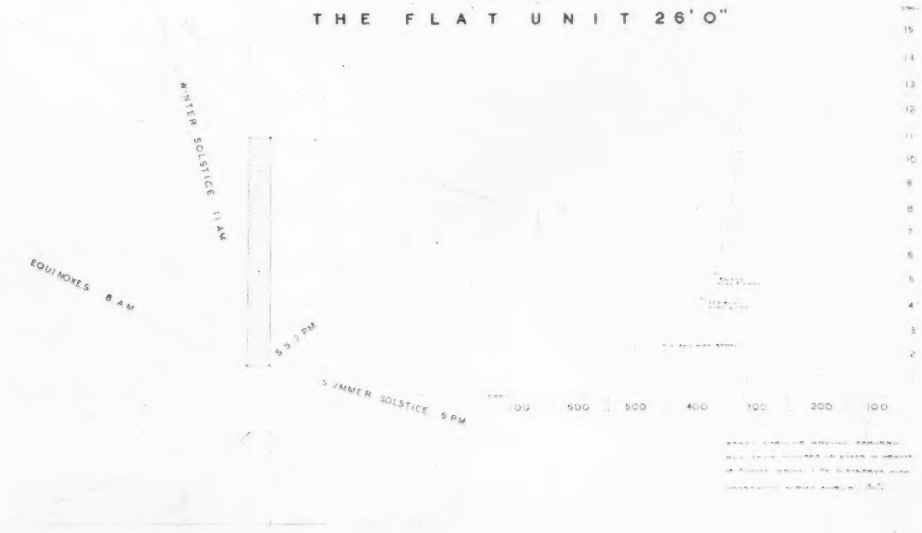
Progress.—Each style of operation has been roughly computed at 9 months, giving a total of 2 years 3 months for the entire scheme. The concrete work for a block of 180 flats will take three months, completing one floor per week.

It will be noticed that 50 per cent. of the houses remain intact until the completion of the job. All householders, however, may take advantage of the health centre from its inception.

Having decided to build 10-storey blocks a north and south axis was chosen, to give equal sunlight on both faces. An alignment of east and west, slightly tilted to get the morning sun in the summer, from the north-east, gives almost the same amount of sunlight, but has the disadvantage of leaving shadows and shaded elevations at mid-day. To have the gardens well sunlit is almost as important, from the psychological point of view as well as the botanic.



THE FLAT UNIT 26'0"



ALFRED BOSSOM STUDENTSHIP 1935-6

R H. Matthew—3

The north-south orientation of the blocks gives straight runs for the ducts to the central power house, easy and direct axis to the flats, and long unobstructed view over what will become virtually parkland with proper care and foresight.

The Flats in Detail.—A half-inch detail of the flat unit is shown, and is almost self-explanatory.

The main considerations in planning have been :—

(1) To provide a flexible unit.
(2) To make all rooms an adequate size for their populations.
(3) To give unobstructed views over as much garden space as possible.
(4) To provide a balcony with some degree of privacy.
(5) To plan the flat as economically as possible, from the working point of view as well as the first cost.

The basis of the unit is a one-roomed flat, with entrance, kitchen and bathroom unit, and large living room, with balcony ; from one to four bedrooms can be added as shown.

Ducts.—A concrete duct runs through the whole height of the block and takes all service pipes. The kitchen-bathroom unit is designed to shorten all pipe runs.

Hot Water Supply.—Straight ducts from the power house take the hot water under pressure to each flat. Here a 30-gallon calorifier supplies bath, basin, kitchen sink, and the radiators are taken direct off the pressure pipe, with a reducing valve in the duct. It is proposed that the hot water be rationed by means of the cold supply : the cistern is situated above the work table, and every morning will be filled from the central power house.

Planning.—All living rooms are planned to face west. Bedrooms face east and west, and all kitchens and bathrooms face east, with high cills to the balconies. Access is by concrete balcony, from the central lifts and escape stairs.

Lifts.—By combining two blocks together an economical lift maintenance has been made possible. Two lifts are provided in each block, in case of breakdown, with an attendant in charge.

The calculation of peak loads is as follows :—

Workmen in mornings.
Children to school.
Total number of flats in two blocks : 200.

Total population is, therefore, 700 persons ; of these it may be assumed that 1-1½ per family is of school age=200-300 children, average 250. Cut out ground and first floor=40 flats=40-60 children, average 50.

Peak load of children is, therefore, 200 ; with a lift to take 20 children this would have to descend 10 times.

Total male population at work in morning : 160 families (in two blocks, 3rd-9th floors). Say 100 men go out at once, with the lift to take 15 men this would have to descend 7 times.

These two loads do not coincide. The men go to work for 8 o'clock and probably require lifts at 7.30 a.m., returning at 4.30 p.m. Children go to school at 8.45 a.m., returning at various times from 3.30-5 p.m. ; younger children going to nursery schools would not go probably till 10 a.m. and return at 3.

Charwomen.

There will be a certain number of these going out early, and would probably coincide with the men, but the bulk will not go out till evening (for offices).

Escape Stairs.—Escape stairs are provided at the ends of all blocks, and in the larger block an extra stair is planned in the centre of its length.

These stairs will be used by tenants up to the 3rd floor, but the lifts will stop, if necessary, on every landing.

Store Rooms.—Pram and cycle stores have been provided, to take perambulators for 20 per cent. of the total number of families, and cycles for 30 per cent. These are situated on the ground floor in every case.

Roof.—The lifts and stairs continue to the roof, where the tank rooms are placed. A verandah covers 50 per cent. of the area, the remainder being open, and fronted with flower boxes. The absence of smoke makes the roof garden a practicable and very desirable additional amenity.

Construction.—The size of the scheme provides possibilities of mass production that have been little afforded so far, probably due to the lack of opportunity.

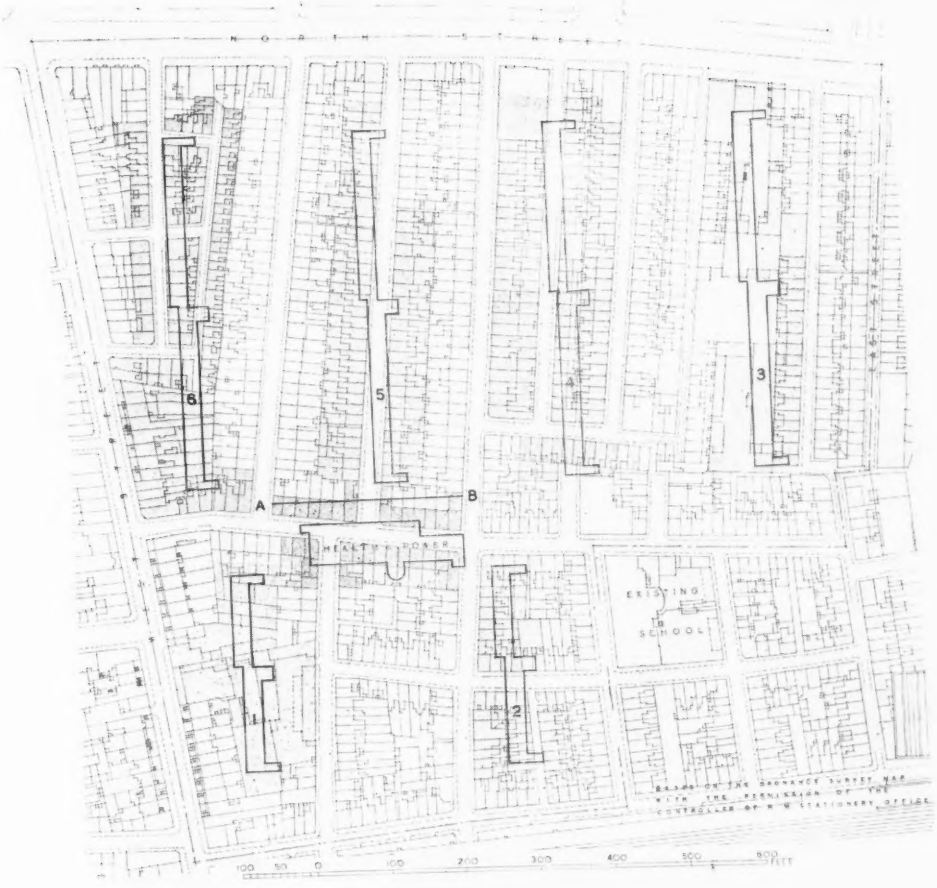
Concrete construction lends itself peculiarly well to mass production, and it has the great merit that its soundness is beyond doubt. In Scotland the costs of framed steel and concrete construction are practically identical, and with the more rational method of construction proposed it is estimated that a saving of from 8 per cent. to 10 per cent. in the first cost may be made.

A central spire of reinforced beams and stanchions runs the entire length of the block ; the floors and outside walls are monolithic with this beam system, each part taking its part of the weight, giving very light sections both for floors and outside walls. A system of shuttering similar to the patent shuttering evolved by Messrs. Tecton & Arup for a block of flats at Highgate, London, is proposed, while the whole building may be erected without scaffolding.

Sound Insulation.—Floors are insulated with two layers of bituminous felt with layers of granulated cork, with ¾-in. cement screed, covered with linoleum.

Partitions.—Internal partitions are of breeze, plastered, with double partitions between flats.

Coal Fires.—No coal fires have been provided, in spite of the British bias on their favours. It has



PROGRESS SHEET

STAGE 1 RE-HOUSE 50 HOUSES IN EMPTIES ON SITE. DEMOLISH WORK SHOPS ETC. BUILD HEALTH AND POWER BLOCK. BUILD BLOCK 1 (100 FLATS) BUILD ROAD A-B

STAGE 2 DEMOLISH 84 HOUSES DEMOLISH WORKSHOPS &C. RE-HOUSE IN BLOCK 1 BUILD BLOCKS 2&3 (TOTAL 280 FLATS)

STAGE 3 DEMOLISH 270 HOUSES RE-HOUSE IN BLOCKS 2&3 BUILD BLOCKS 4,5&6. HOUSE REMAINDER

THE ALFRED BOSSOM STUDENTSHIP 1935-36

R. H. Matthew—4

been considered that the advantages of a smokeless atmosphere outweigh the sentimental attachment of the open grate. Central heating means an even temperature and less work for the housewife.

An electric fire is provided for special occasions in the living rooms, and electric plug points in every other room.

Lighting and Heating.—With a standardised charge of 5d. a week for lighting, the remainder of electric consumption for heating and cooking is at a rate of ½d. per unit, and as far as can be calculated this would compare favourably with gas at 6.9d. per unit. This being so, we suggest small electric cookers with 13-in. cube oven for kitchen and a 2-bar fire for living room.

Windows.—All windows are on a standard width of 2 ft. 4 in. and multiples. They are shown as steel-framed, but it is suggested that concrete frames of similar weight might be investigated with advantage. The price seems to be favourable from any information available and the maintenance would certainly be very much reduced.

Metal Trim.—Metal-covered skirtings and door architraves of standard pattern are used throughout. It is hoped that with rigid standardisation throughout the buildings the total cost would be reduced from that given in the estimate.

Cost.—Many items are purely theoretical, and the full effect of thorough standardisation is impossible to foresee, but with carefully worked out time schedules and standardisation of design in every part it is quite certain that costs can be very much reduced in order to make possible the increased standard of living indicated by this scheme.

ALLOCATION OF FLATS

In 1931 Census, for St. Leonard's Ward in Edinburgh :

Total private occupied homes	5,017
Total number of persons	20,080
Average size of family	4.0002, say 4

Given in the conditions 3,650 persons to be rehoused on the site, the number of families to be re-housed on this basis would be

$$\frac{3{,}650}{4} = 913$$

The sizes of families have been allocated in the same proportions as those in the St. Leonard's Ward, and are given below.

Size of Family	*Per Cent. in St. Leonard's Ward*	*Total Number of Families*	*Total Number of Persons*
1 ..	8.5	78	78
2 ..	18	164	328
3 ..	19.8	181	543
4 ..	17.8	165	660
5 ..	14.1	129	645
6 ..	9.5	88	528
7 ..	5.3	48	336
8 ..	3.5	32	256
9 ..	1.8	16	144
10 ..	.9	8	80
11 ..	.3	3	33
12 ..	.15	1	12
13 ..	.06	0	0
14 ..	0	0	0
15 ..	.02	0	0
Totals		913	3,643

The determination of the size of house suitable for each family can only be done approximately as the details of the composition of each family are not known, but a rough approximation can be given. The general standard taken (modifications are noted under) is Table 1 of the First Schedule in the Housing (Scotland) Act, 1935. 25 and 26 Geo. 5.

Note.—The average size of family for the whole of Edinburgh and from the 1931 Census is 3.8003.

ALLOCATION OF FLATS IN BLOCKS

I.—In 8 blocks of 90 flats per block : Each block composed as follows :—

No. of Rooms	1	2	3	4	5	
Ground Floor ..	4	1	3	1	—	
1st floor ..	4	—	1	1	3	
2nd floor ..	4	—	1	1	3	
3rd floor ..	—	4	2	3	—	
4th floor ..	—	4	2	3	—	
5th floor ..	—	4	2	3	—	
6th floor ..	—	2	6	1	—	
7th floor ..	—	2	6	1	—	
8th floor ..	1	2	3	3	—	
9th floor ..	1	2	3	3	—	
Totals ..	14	21	29	20	6	
In 8 blocks ..	112	168	232	160	48	720

II.—In 4 blocks of 50 flats per block : Each block composed as follows :—

No of Rooms	1	2	3	4	5	
Ground floor ..	2	—	—	2	1	
1st floor ..	—	2	2	1	—	
2nd floor ..	—	2	2	1	—	
3rd floor ..	—	2	2	1	—	
4th floor ..	—	2	2	1	—	
5th floor ..	—	2	2	1	—	
6th floor ..	—	—	5	—	—	
7th floor ..	—	2	2	1	—	
8th floor ..	—	2	2	1	—	
9th floor ..	—	2	2	1	—	
Totals ..	2	16	21	10	1	
In 4 blocks ..	8	64	84	40	4	200
Totals in scheme ..	120	232	316	200	52	920
Percentage ..	13	25.2	34.3	21.7	5.8	100

EDUCATION

(1) Children of pre-school age.
(2) Children of school age.
(3) Adults.

1. For the children of pre-school age a crèche for infants is provided in the health centre ; for children from the ages of 2-5 years there are two nursery schools (described hereafter).

Existing School

(2) For children of school age there is an existing school, just off the site (see site plan). This is of the old high type, built on about ⅓ of an acre, and fronting on to two streets.

Proposal to Extend the Scheme

It is suggested that from the foundations of the plan a scheme of this importance would naturally extend to the east, where an important connecting road runs north and south.

Another 10-storey block could then be built, and the whole area to the south-east of the site could be cleared, leaving a site of about 3½ acres to take a new school built on more spacious lines. The suggested position of the school is shown on the site plan. The intervening roadways would naturally disappear and children would not have to cross a traffic route on the way to school. The school, in fact, would become part of the scheme and the layout would be continuous.

(3) For adults it is hoped that the health centre will take an important part in educating the parents to live in their new surroundings. The proposals for this building are given below.

NURSERY SCHOOLS

Remarks.—The nursery schools were made possible as part of the national education by the Education Act of 1918. It is the most effective method yet found of giving to the child's home the assistance necessary for securing the healthy development of the stage between babyhood and school life, i.e., 2-5 years.

Medical Officers of Health, experts in mental hygiene, educationists and parents all insist on the importance of the pre-school age as the determining factor in the future welfare of the child. At the moment the nursery school is the only means by which satisfactory medical supervision of the years 2-5 can be obtained.

In addition to growing, it encourages the growth of the community spirit and teaches the child unconsciously the way to live as a member of a community.

The schools also can do much for the parents in showing them that minor ailments, etc., are not just to be accepted with as good grace as possible, but must be inquired into and prevented. They give the parents a new outlook and reasonable hope of attaining a better standard for their families. The conditions aimed at are as follows :—

1. An open-air life with use of an open-air type of building, with sunny aspect.
2. Ample space for free activity.
3. Contact with Nature, plants, water, etc.
4. Companionship with other children in small community life, under skilled supervision.
5. Equipment adapted for independent use by young children.
6. Scientifically devised nutrition.
7. Balanced day of rest and activity.

Nursery School Requirements.—The nursery school advocates insist on groups of not more than 40 children working in one group and each group should have one unit of equipment, i.e., bathrooms, lavatories and cloakrooms. This is the important characteristic of the " shelter " type of building. Each shelter is a self-contained unit consisting of large divided playroom, cloakroom, and lavatory containing basin with service of hot and cold water and w.c.s.

The Site.—Is essential to be large to allow space for free activity of children, as well as sufficient ground to be used as garden and playground. The aspect should be southerly. Enclosure and exits : Experience indicates that the site should be enclosed and all exits under easy supervision.

The Buildings Provided.—It is estimated that there will be between 250 and 300 children between the ages of 2 to 5 years living on the site. Assuming a 75 per cent. membership of the schools (there is no compulsion to send children) space should be provided for about 180-200 children.

As small units are considered essential to the system, two schools have been provided, each with two units of 40 children ; the unit consists of a classroom, 40 by 25.0, facing south and opening on to a covered verandah with sliding doors along the whole of one side, and the following lavatory accommodation.

Bathrooms, Lavatories and Cloakrooms.—Flooring is terrazzo in bathrooms and kitchen.

(*a*) 4 w.c.s with pedestals of varying heights.
(*b*) 10 wash basins.
(*c*) 1 sink bath.
(*d*) 1 cloakroom.

For each unit of 40 children.

Shower baths too are useful for safety from infection and bracing effect.

A foot bath is sunk into the ground for use in summer. W.cs. are placed in separate compartments with half doors. Cloakrooms with provision for drying clothes, adequate cupboards.

Heating.—Should give a temperature of 55 deg. to 60 deg. near the floor of the room in coldest weather.

The general accommodation provided in each of the two schools is as follows :—

Two playrooms, each for 40 children and suitable to be subdivided with sliding doors. Lavatory and cloakroom accommodation to each unit and one open-air room to be shared by both. Doctors, staff rooms, etc., on upper floor as seen on plan.

From information received from a nursery school in Edinburgh I have taken the running cost to be £400 per annum. Children pay 1s. per week, food provided by school ; in some cases education authority pay first and send it in cooked. The education authority give grant of £75, and the public health give a grant of £15.

Details of maintenance received from another school in Edinburgh are as follows :—

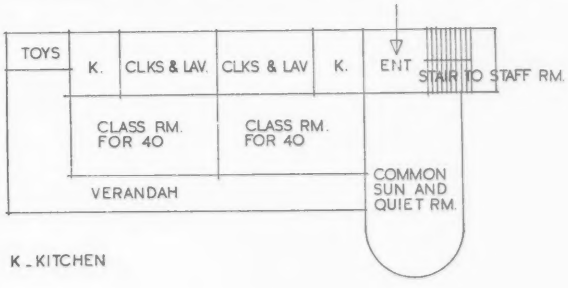
Heating	
Electric Light	
Gas and Cleaning	
Cookers	£165
Salaries :	
2 of staff, 1 qualified and 1 voluntary ..	£350
Total	£515

Food, approximately for 50 children per head per day. Total per year—£200.

Gardens and Playground

(1) Playground paved with a material which dries quickly.
(2) Grass plot.
(3) Flower beds with paved walk beside them.
(4) Sand pile.
(5) Sheds for tools and prams.

Here the love of flowers is inculcated at an early age and the children learn to treat gardens and flowers in a proper



manner. The contact with the earth and perhaps gardening on their own teaches many valuable lessons.

HEALTH CENTRE

It has been thought expedient to build a health centre on the lines of the one at Peckham. In such a large scheme as the one under discussion, where a power house was being erected, it was only another step to attach a health centre to it which could benefit from the facilities provided therein.

The centre is there to study families in normal health and thus prevent disease. Each family who joins it has a periodic medical overhaul. The doctor can then see the member's reaction to any given treatment and can trace early symptoms of disease. The rule is made that the factor of environment, in the case of child members, by which means a good or bad physique is obtained, must be controlled. In the case of actual disease the members are passed on to their own medical advisers, and no treatment of disease is given at the centre.

Nowadays the great tendency is towards the disintegration of the family, and the idea of the health centre is to preserve it and provide occupation for its various members all under one roof.

The wash house is attached to the centre, and the mother can come and do the weekly washing and leave her chidren in safe hands to play in the playrooms or on the verandah surrounding it. Again, the busy mother can enjoy social intercourse in the lounge and cafeteria, and here in the evenings whole families can come and sit and learn to enjoy one another's society. There is ample room for lectures, social meetings and classes. Every effort is made in such a centre to stimulate a healthy, profitable and enjoyable use of leisure. When this state of things is accomplished the family will be a happy, self-contained little community, the members not seeking an outlet in pursuits which undermine their whole character and health, but instead using their leisure in such a way that valuable interests and hobbies are formed which will stand them in good stead whatever their future circumstances may be.

Here is a summary of the actual accommodation provided :

Ground Floor.

Changing rooms.
Children's playroom with verandah.

First Floor.

Small gymnasium.
Wash house.
Swimming bath.
Lounge and cafeteria.
Clinic.

Second Floor.

Rooms for lectures.
Committee rooms.
Staff rooms, etc.

Over the baths there is a roof terrace. No information can be got as to running costs, but at Peckham it is believed that each family pays 1s. per week.

WASH HOUSE

Equipment.—The following equipment is based on the study of wash houses in Edinburgh which have been in operation for 30 years.

40 tubs.
Three electric washing machines, each equal to three tubs.
One hydro extractor to every six tubs.
One drying horse to every tub.
Three electric mangles.
Four folding tables.
One large ironing table.

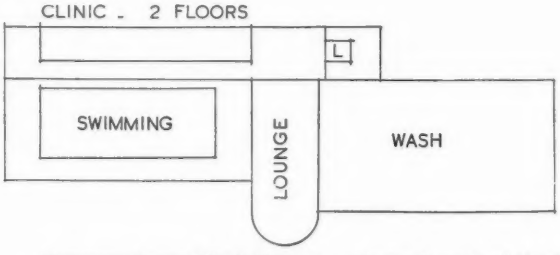
The drying horses slide on wheels, each one 1-ft. wide. Hot air is blown through perforated and tapered metal ducts running at roof level and extracted from floor level through ducts to open air.

A waiting room and office is provided with turnstiles, and storing space for perambulators and trolleys. It is recommended that standard trolleys should be provided in each block of flats for this purpose. From information which has been received from Leeds about a scheme now in progress there, heat is generated by refuse distributor plant situated, in this case, immediately under the wash house to serve all the laundry equipment. The power house boilers will serve only the central heating and hot water, including the heating of the swimming bath immediately adjacent.

It is estimated that three Lancashire coupled boilers 18 ft. long by 8 ft. in diameter will be sufficient for the purpose. In Edinburgh prices of coke are as favourable as coal for boiler house purposes, and it is suggested that coke should be used in order to avoid smoke.

Annual expenditure on wash house calculated on study from yearly figures of 11 Edinburgh wash houses with total tub capacity of 770 and total number of washers 665,172. Annual cost per tub is about £18 13s., and this includes wages of attendants, general repairs and maintenance, water, gas and electricity, furnishings, miscellaneous expenses.

Total expenditure, £740 ; but excludes salary of general superintendent, interest of sinking fund (which appears elsewhere) and heating, the latter an item in the destructor plants.



Revenue from Wash House.—Charge is made of 3d. per hour for the use of the wash house. It has been calculated in Edinburgh that the average working-class weekly washing can be done in from 1½ to 2 hours ; assuming eight hours' service in five days per week and four hours on one day per week, totalling 44 hours, and assuming 80 per cent. working capacity (to allow some tubs to remain idle), the estimated return per year should be £915 4s.

DISINFESTATION

The method to be employed is the same as in use in Leeds. Furniture and bedding are collected from old house in morning by municipal service in specially constructed vans and conveyed to disinfecting station, which has been specially erected for the purpose. Bedding then steamed, furniture submitted to poison gas (prussic acid), both redelivered to tenant the same evening in new house. Meanwhile the key of that house has been supplied to tenant and "skeleton" supply of furniture given for use during day. The housing

manager can do much in educating the tenants in the principles of cleansing. In demolition the workmen should use blow pipes to timber.

A useful service is supply of standardised furniture to tenants on weekly payment system. This is at present being tried at Leeds with great success.

ADMINISTRATION

I do not propose to erect a special block for undesirable tenants as I feel this would have a bad psychological effect. Discussions with housing directors and housing managers have led to this decision, and example of Amsterdam. Rather by careful placing of such people and education and assistance by the housing manager the desired result would be achieved.

NOTES ON PLANTING

It has been extremely difficult to calculate costs of planting as so much depends on type of site, for example, whether earth has to be carted or not. For general use I propose to use birches and rowans, which are quick growers. At focal points big trees, such as beeches, planes, horse chestnuts and large wild cherry. Nearest to blocks, shrubs in clumps will be used; every effort has been made in planting to get away from the typical evergreen bushes which are seen in housing schemes. They have disadvantages of retaining their dirty leaves all the year and miss the fresh green of spring. Flowering shrubs have been used, philadelis and spiraea, hydrangea, flowering currant, laurel, berberis, azalea, ribes, cotoneaster, the bush which attracts birds. No bushes bearing poisonous berries have been chosen. Lawn.

SUMMARY OF COST

I.—CAPITAL COST

	£	s.	d.
6 blocks (total 920 flats)	413,046	0	0
35 shops	21,500	0	0
Health centre and power house	17,800	0	0
Nursery schools (2)	9,600	0	0
Wash-house equipment	3,200	0	0
Land (at £5,000 per acre) 19 acres	95,000	0	0
Tennis courts, etc.	2,000	0	0
Public-house	3,000	0	0
Total cost	565,146	0	0

II.—MAINTENANCE

	£	s.	d.
Total for 920 flats—per flat £13 10s. 4d.	12,435	0	0
Wash house	740	0	0
Nursery schools (2)	1,400	0	0
Health centre	1,500	0	0
Gardens and lay-out	500	0	0
Shops and public-house	280	0	0
Total maintenance	16,855	0	0

III.—REVENUE

	£	s.	d.
From flats—total income from 920 flats	17,198	16	0
From shops—35 at £30 rent p.a.	1,050	0	0
Public-house	150	0	0
From wash-house	915	0	0
From nursery schools (2)	200	0	0
From health centre	897	0	0
Total revenue	20,410	16	0

	£	s.	d.
Capital cost	565,146	0	0
Maintenance	16,855	0	0
Revenues	20,410	16	0

	£	s.	d.
Annual capital charges necessary to repay £565,146 at 4½ per cent. over 60 years	27,383	14	9
Owners' rates	2,375	14	0
Allowance for repairs, insurance and general maintenance	17,000	0	0
Occupiers' rates	3,660	0	0
Total	50,419	8	9
Annual revenue.			
Balance to be met from Government grant and local rates	30,007	12	9

I.—CAPITAL COST

(*a*) *Large Blocks of* 180 *Flats.*

	£	s.	d.	Total Cost £	s.	d.
Total cube 1,314,400 cub. feet (cubed at 1s. 0½d.)				68,458	0	0
Less 10 per cent. for rationalised construction				61,613	0	0
Add: For escape stairs (2 at £275)				550	0	0
For central staircase				400	0	0
For balconies (at £1 per yard run)				1,350	0	0
				63,913	0	0
This represents a cost per flat of	355	0	0			
Add: Garchey system	19	0	0			
Roads, paths, ground work and sewers	47	0	0			
Office and consultants	24	16	0			
Building of boiler house	2	10	0			
Total per flat	448	6	0			
Total cost of 1 block of 180 flats				80,694	0	0

(*b*) *Small Blocks of* 100 *Flats.*

Flats cubed at 1s. 0½d. (less 8 per cent.)

	£	s.	d.
Total cube 742,000 cub. feet.	37,255	0	0
Less 8 per cent. for rationalised construction	34,275	0	0
Add: For escape stairs (2 at £275)	550	0	0
For central staircase	400	0	0
For access balconies at £1 per foot run	630	0	0
	35,855	0	0

	£	s.	d.	£	s.	d.
This represents a cost per flat of	358	0	0			
Add: Garchey system	19	0	0			
Roads and paths, ground work and sewers	47	0	0			
Office, administration and consultants	24	16	0			
Building of boiler house	2	10	0			
Total per flat	451	16	0			
Total cost of 1 block of 100 flats				45,185	0	0

II.—MAINTENANCE

(*a*) Flats.

	Per Flat. £	s.	d.
Central heating and hot water	4	8	10
Management	1	7	6
Defaults	0	13	0
Insurance	0	4	0
Water	0	13	0

	£ s. d.
Repairs	4 0 0
Lifts	1 14 8
Landlord's services	0 10 0
Total per flat	13 11 0
Total per 920 flats	12,466 0 0
(*b*) Wash house	740 0 0
(*c*) Nursery schools (£700 each)	1,400 0 0
(*d*) Health centre	1,500 0 0
(*e*) Gardens and lay-out	500 0 0
(*f*) On shops and public house, say 10 per cent. of rent	280 0 0
Total maintenance	16,855 0 0

III.—Revenue

(*a*) From Flats.	No. of Flats.	Yearly Rent.	Total Revenue. £ s. d.
1 Room	120	£11 14	1,408 0 0
2 Rooms	232	£15 12	3,529 4 0
3 Rooms	316	£19 10	6,162 0 0
4 Rooms	200	£23 8	4,680 0 0
5 Rooms	52	£27 6	1,419 12 0
Total revenue from Flats			£17,198 16 0

	£ s. d.
(*b*) From Shops and Public-house.	
35 shops at £30 p.a. rent	1,050 0 0
1 public-house at £150 p.a.	150 0 0
(*c*) From wash house	915 0 0
(*d*) From nursery schools (2 at £100)	200 0 0
(*e*) From health centre, at 6d. per family per week. Allowing 75 per cent. membership	807 0 0
Total revenue	£21,519 0 0

	£ s. d.
Under the 1930 Act the Government grant is £2 10s. per person per annum for 40 years at 4½ per cent. calculated over 60 years	2 4 7
The local authority contribution is £4 10s. per house per annum for 40 years at 4½ per cent. calculated over 60 years	4 0 3
Total Government grant 3,650 × £2 4s. 7d.	8,146 0 0
Total rate contribution, 920 × £4 0s. 3d.	3,691 10 0
Total	11,841 10 7
	30,007 12 9
	11,841 10 7
Yearly deficit on whole scheme	18,166 2 2

This sum would represent four-fifths of a penny on the local rates.

II.—THE SILVER MEDAL DESIGN AND REPORT BY R. FRASER REEKIE [A.]

General Considerations

This scheme has been studied with a view to satisfying the following principal requirements:

(*a*) Provision of flats planned in accordance with modern ideas giving the maximum amount of sunlight, air, and view to all rooms.

(*b*) Economy of construction, supervision, services, and maintenance.

(*c*) Provision of adequate recreation space and other amenities for the general well-being of the population.

Site Lay-out

Disposition of Blocks.—Twelve blocks are provided, all running dead north-south, in two rows separated by the central recreation area.

The rows contain 8 and 4 blocks respectively, placed side by side, with a distance across open space of approximately 110 ft. between.

This spacing gives a maximum light angle of 22½ deg. from the main roof line of one block to the bottom of the ground-floor window of the next block.

Living-rooms to all flats (with the exception of the 1- and 2-room flats on the ground floors) face west and receive an average of 4 hours' sun per day.

All bedrooms face east and receive an average of 3½ hours' sun per day.

The placing of the blocks north-south also takes advantage of the slight slope of the ground for the running of hot-water service pipes and drainage.

Estate Road.—The estate road is entered from West Street, as this is a wide road, but is quieter than North Street or South Street.

The estate road does not pass through the site, but encircles the central recreation area and returns to West Street.

It is 15 ft. wide and one-way traffic only would be permitted.

The road gives immediate access to the end of each block.

A speed limit of 15 m.p.h. would be imposed on all traffic entering the estate.

Secondary communications, not intended for vehicles, except on the short length to the power house, are also provided to link up the ends of the blocks not touched by the estate road.

Paths for pedestrians are also provided, giving access to the surrounding streets.

Estate Office.—The residence of the supervisor, rent office, and suggested tenants' meeting room are placed in a small block on the axis of the central recreation area at the west side of the site.

This block commands the entrance to the estate.

It is centrally disposed and is readily accessible by all the tenants or by visitors.

(*Some of the figures in both Reports are incorrect. Except for the correction of obvious discrepancies they appear as given in the Reports.*—Ed.)

From the site-planning point of view the block provides an axial feature.

As one side of the block faces the recreation area, it is suggested that a sports pavilion might be included.

School and Crèche.—A school is provided for children up to 8-9 years old, in order that they should not be daily exposed to traffic risks outside the estate.

Provision for older children would be found in the surrounding neighbourhood.

A crèche is also attached to the school, as this is considered essential for a scheme of this size, giving working mothers a place to leave their young children during the day and providing a centre for child-welfare and maternity service.

The building is situated at the east end of the recreation area, away from main thoroughfares, but easily accessible from all flats.

It provides an axial feature.

Boiler House.—This building combines the functions of incinerator in the refuse-disposal scheme and steam heating for the central-heating and hot-water services.

It is placed to the south of the site at the lowest point in order to take advantage of the slope of the ground for pipe-runs.

Recreation and Games.—The central recreation area is divided as follows :

1. Main sports arena, 320 ft. × 120 ft. This is large enough for football, cricket, etc., and mass physical culture. There is ample accommodation for spectators. The arena could be floodlit at night.
2. Three hard tennis courts.
3. Bowling green.
4. Children's playground, equipped with paddling pool and gymnastic apparatus.
5. Gardens between blocks for the aged and for very young children.

Shop Sites.—The provision of shops has not been included in the scheme, but suitable positions between blocks at the north side of the site are shown on the site plan.

Shops in this position would serve as a screen to the gardens, and they would be accessible from the North Street for outside customers.

General Planning

Typical Block.—For purposes of mass production and standardisation of building units, the essential floor plan is the same throughout each block.

Standard units of spacing for stairs and services are adopted and variations are avoided as much as possible ; requirements of internal planning are met by the placing of the partition walls.

Kitchens and bathrooms are grouped vertically and in relation to one another in order to utilise a common duct through which all the service pipes run.

Access to the flats is by means of staircases serving two flats per floor.

This method of access is slightly more expensive, according to published figures, than access by external balcony, but has many advantages :—

(*a*) Avoids the passing of bedroom windows by strangers ;
(*b*) Reduces noise ;
(*c*) Avoids crowded chutes and staircases ;
(*d*) Is not likely to lead to friction between tenants ;
(*e*) Upkeep is less.

With regard to the latter point, it would be the duty of the tenants on each floor to sweep their own flight downwards at regular intervals, and at the bottom landing a grating is provided through which the dust falls into the refuse bin.

It was at first considered that the blocks should be only 5 storeys high, in order to avoid the additional cost of lifts, etc., and because of the poor bearing value of the ground.

It was found impossible, however, to provide the necessary accommodation in 5-storey blocks without building on too great a proportion of the site and overstepping the density restrictions ; and it was decided, therefore, to extend one section of each of 11 blocks vertically to 15 storeys.

By so doing, instead of designing a new tower, the standardisation of fittings and construction is not greatly affected. A lift is provided in each of the 15-storey sections, with automatic operation ; wooden gates to be provided to minimise risks of trapped fingers of children.

The 15-storey sections are not taken at the ends of the blocks, but are placed one section in to take advantage of the buttressing effect of the remaining structure, and thus reduce size and cost of foundations.

In placing the flats, the following principles were adhered to :

(*a*) As the ground-floor flats do not receive as much sun and air as the others they should comprise 1- and 2-room flats, which are usually occupied by bachelors, aged couples, or childless couples.
(*b*) Families of 5, 6 or 7 persons occupying 5-room flats are more likely to contain members for whom stair-climbing is undesirable, and therefore these flats should not be too high.

The ground-floor flats are set back from the main face of the building, forming a covered way which gives on to the staircases and makes provision for access to the drainage and service piping.

There is a natural variation in the ground level along a standard block of about 5 ft. This is levelled out in the construction to some extent, bringing the ground-floor line two to three feet above at one end and about two to three feet below ground level at the other.

The covered way in each block is approached from the estate road by means of a gentle ramp. Steps are avoided on account of prams.

Detailed Accommodation

The following table gives the approximate floor area provided in the various types of flats :—

	Living room	*Bed-room 1*	*Bed-room 2*	*Bed-room 3*	*Bed-room 4*
1-Room	200				
2-Room (Ground Floor)	200	125			
2-Room (1st and 2nd Floor)	160	130	(all cu. ft.)		
3-Room	175	130	97		
3-Room (Tower and End)	180	130	78		
4-Room	200	130	97	97	
5-Room	256	130	95	95	60

The area of the living-room increases with the size of flat. Bathrooms are standard throughout, with the exception of the ground floor, but the 5-room flats have a separate w.c.

The kitchens are standard for 2-, 3-, and 4-room flats, but are increased in size for the 5-room flats and are decreased for 1-room flats.

All the flats are entered from the public staircase. A hall is provided in every case, but internal corridors are reduced to a minimum, and the space saved is absorbed into the living-rooms.

The hall gives access to the living-room, kitchen, bathroom, and at least one bedroom. The latter is thus conveniently placed for use by a visitor of sick member of the family.

Living-Rooms.—The living-rooms are all of good shape with large window in the long side and glazed door on to the balcony.

A service hatch in provided in the wall adjoining the kitchen with a shelf under.

Heating is by a radiator placed beneath the window and a built-in electric fire in the end wall opposite the hatch.

One or two standard cupboards open off the living-room for storage.

Bedrooms.—All bedrooms are provided with at least one built-in wardrobe and are fitted with 1 kw. electric wall fire.

Bathrooms.—Sanitary fittings, all in white, comprise : " Artisan " bath, with panel front (5 ft.), lavatory basin, w.c. pedestal.

Kitchens.—The kitchens have been designed on modern principles to reduce labour.

Along the wall adjoining the living-room a built-in fitment is arranged comprising general store cupboard—brooms, china, etc.—larder cupboard, working table with cutlery drawers in cupboard under, hatch, and china shelves.

Along the opposite wall is arranged the sink, 24 in. by 18 in., with enamelled draining board ; slatted shelf under for pail ; table height electric cooker ; and cupboard under cooker.

For details of construction see section on fitments.

Balconies.—In front of the kitchen and bathroom in every flat, except those on the ground floor, there is a wide balcony entered through a glazed door from the living-room.

Advantages of this arrangement are that the family can have meals on the balcony within easy reach of the kitchen, and that young children can play in the fresh air under the constant supervision of their mother working in the kitchen or living-room.

The balconies are designed with solid sides forming flower boxes and interlaced metal fronts. This design permits the maximum amount of light and air and yet avoids through draughts. The metal front is designed to prevent climbing by children.

The position of the flower boxes makes them visible from the living-room, but prevents them interfering with the comfort of persons using the balcony.

Laundry Facilities.—In an attempt to reduce the work of the housewife in connection with washing the following provisions have been made :

The family wash can be divided into two sections :

(*a*) The weekly heavy wash, i.e., blankets, sheets, etc.

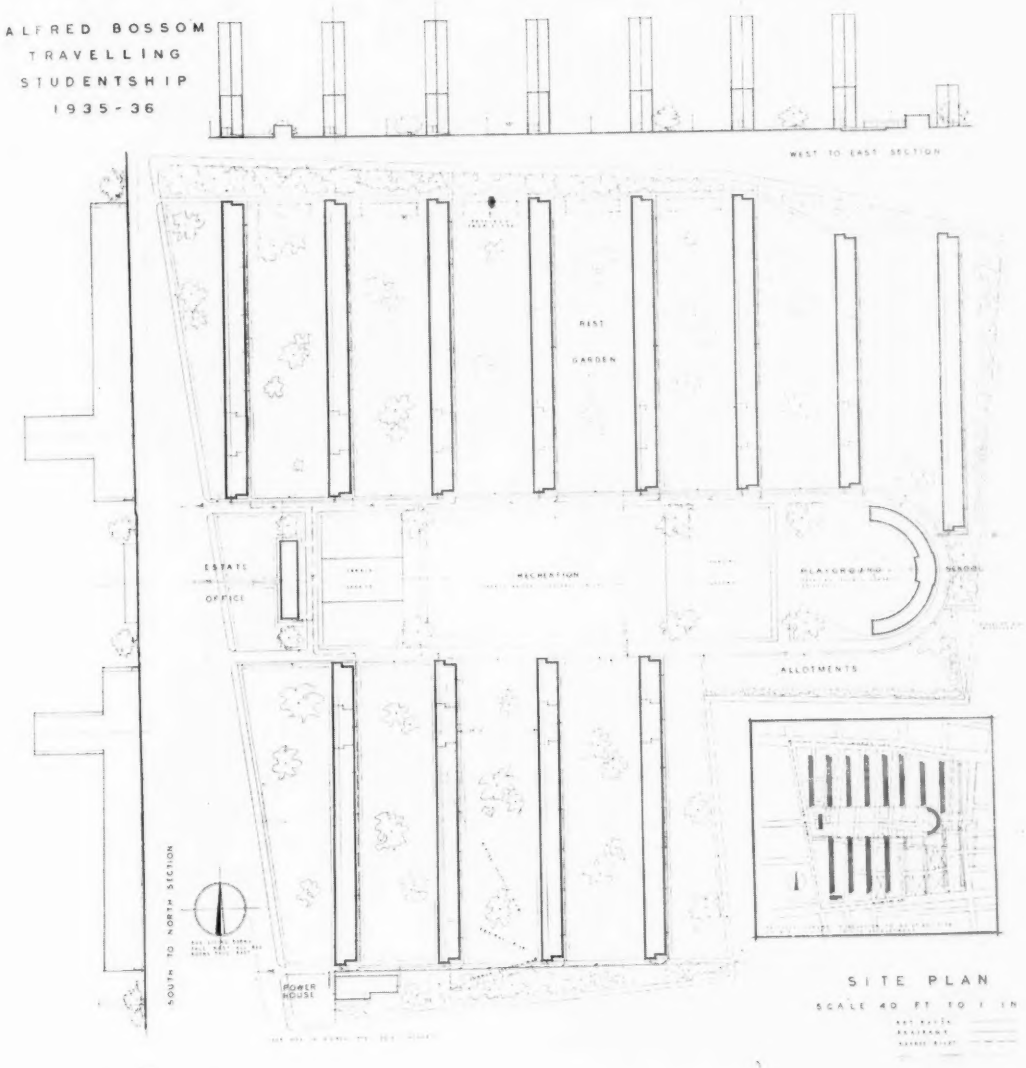
(*b*) The light wash, more or less daily, i.e., small articles of clothing, etc.

and separate provision is, therefore, made for these.

For the heavy wash a small laundry is provided in each block at one end on the ground floor near to the calorifiers, and adjoining this wash house is a large drying room. Washing machines, sinks and ironers are installed, and each family is permitted the use for

Layout of Kitchen

THE RECTIFICATION OF A SLUM AREA



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one half day per week according to a rota. A small charge would be levied in all but exceptional cases.

Although the cost of a number of separate wash houses is greater than a central installation, there is a great saving in the distance that most of the housewives would have to traverse whilst carrying the laundry basket.

For the light wash, as this can only be carried out conveniently in the home by using the kitchen sink, provision has been made for external drying by giving all flats with balconies an outside cupboard with perforated walls fitted with racks.

Refuse Disposal.—Refuse disposal is by the use of chutes.

At each staircase is a 12-in. diam. (15-in. in case of tower) vertical chute, composed of glazed earthenware piping in 9-ft. lengths, passing through the half-landings, with letter-box openings at every other flight.

Each chute delivers into an all-metal container on wheels standing in a special chamber under the first half-landing.

This container is removed at regular intervals and is replaced by an empty container.

The full container is automatically sealed on removal, and is wheeled along the service path to the boiler house, where the contents are burned.

The tenants walk up or down half a flight to their respective access traps in the chute.

The chute is carried up beyond the roof for ventilation.

As the chute does not deliver directly over the container, a projecting ledge is arranged to direct the garbage.

Pram and Cycle Stores.—On the ground floor and entered from the covered way alternate pram and cycle stores are provided between the staircases in all blocks.

CONSTRUCTION

General.—The buildings are constructed by means of a steel skeleton on reinforced concrete foundations with external walls of pre-cast standardised concrete units, on the lines of the system evolved by M. Mopin at Bagneux, and which is based on the scientific disposition of modern economics and structural requirements.

This system, after repeated tests in France, has been found to be perfectly sound, and there would seem to be no reason to suppose that its adoption in England would be unsuccessful.

The chief advantage of the system is greatly increased speed of erection over other methods, producing reduction in mortgage repayments and general overheads.

The cost of materials and fittings is also reduced by the thorough standardisation, and a greater percentage of unskilled labour is employed in the manufacture of the building units and in erection.

The underlying structural principles are as follows :—

1.—The erection of a very light steel skeleton which until it is stiffened by the addition of walls, floors, etc., is unable to carry the ultimate load. This skeleton also acts as the only scaffolding required for all subsequent erectional work—another considerable economy in outlay on plant.

2.—The beams are stiffened by a minimum of reinforced concrete cast in situ, and the pre-cast concrete staircases are erected and used in place of ladders for vertical communication.

3.—Floors consisting of standardised T- and U-shaped units of vibrated concrete are then laid and are intimately knitted to the skeleton by a series of cramping projecting reinforcing bars. These floors act as platforms on which work may proceed for the erection of walls, etc.

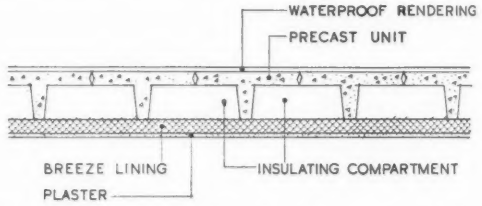
4.—The walls, balconies, etc., composed of similar units to the floor, are then erected together with the pre-cast reinforced concrete window frames.

The walls are self-supporting throughout their height and carry the floor loads in conjunction with the steelwork.

5.—The plumbing and fittings are now fixed in standard units a storey at a time.

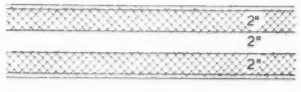
External Walls.—As well as the pre-cast units mentioned above, a 2-in. breeze concrete inner skin is built up knitting to the outer shell, and thus providing a series of hollow insulating compartments.

An external rendering of waterproof paint is applied.



Internal Partitions.—Internal divisions are constructed either in breeze block or by breeze block combined with fitments.

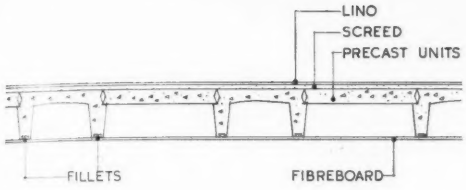
The wall separating the hall and living-room from the bedrooms in each flat is composed of the latter, and the remaining partitions are of 2-in. breeze block, which are double where they occur between flats.



Floors.—The floors are insulated by constructing the ceilings of fibre-board nailed to fillets of wood allowed for in the pre-cast units.

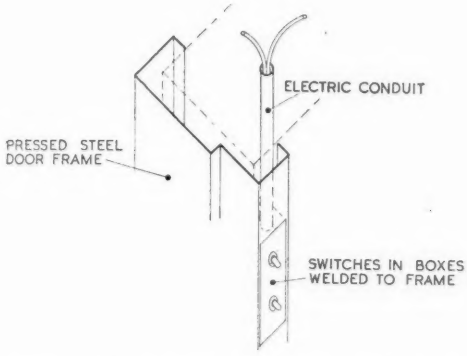
A skim of plaster is applied to the fibre-board ceilings.

The floors in all the rooms and under all cupboards are finished to a smooth level by screeding, to which is applied stout linoleum in mastic.



Doors.—The internal doors are skeleton-framed with flush ply faces hung in pressed metal frames. (Advantage is taken of these metal frames to incorporate electric light switches in standard positions.)

Door furniture comprises latch, bolts and letter-box to outer doors, and simple catch and lever handle to inner doors ; all B.M.A. finish.



Windows.—The window assemblies conform to two standard sizes only.

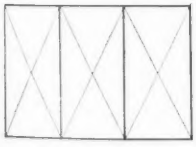
All living-rooms have openings 8 ft. by 5 ft., composed of four opening units each 4 ft. by 2 ft., with four fanlights, two of which open, each 2 ft. by 1 ft., over.

The combined window to the kitchen and bathroom and the windows to all bedrooms are composed of three 4 ft. by 2 ft. opening units.

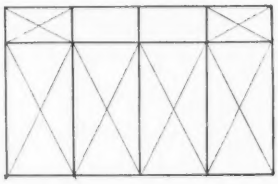
Windows are all-metal ; no glazing bars.

There are 990 living-room-type windows and 4,070 bedroom-type windows in the scheme.

The cill, sides and head forming the opening are of pre-cast reinforced concrete units.

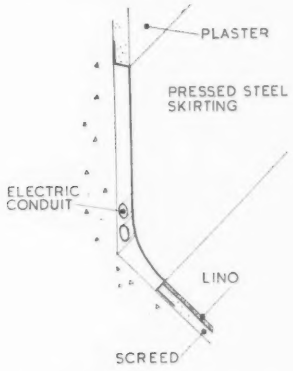


BEDROOM TYPE



LIVING ROOM TYPE

Skirtings.—The skirtings are in pressed steel and are coved. They are vermin-proof and provide further provision for running of electric wiring.



Lighting and Heating.—Apart from the one radiator under the window, each living-room is provided with a 3 kw. electric fire.

A 1 kw. built-in wall electric fire is provided in every bedroom.

Electricity has been chosen for heating on account of reduction in initial outlay and for reasons of space and cleanliness.

Plumbing.—The grouping of the kitchens and bathrooms makes it possible to include all the main service pipes and drains in a vertical duct.

These ducts are linked up in a straight line on reaching the ground floor.

Drainage is by the one-pipe system.

The duct is accessible from every floor and an inspection chamber is provided at the foot. A ventilating pipe is carried beyond the roof level.

Each block has at its lowest point a chamber containing two calorifiers, which are heated by steam from the boiler house. One calorifier is for the hot-water supply and the other for central heating.

The service pipes from this chamber run up the ducts to serve the various floors.

Tank room is provided on the roof over each group of bathrooms.

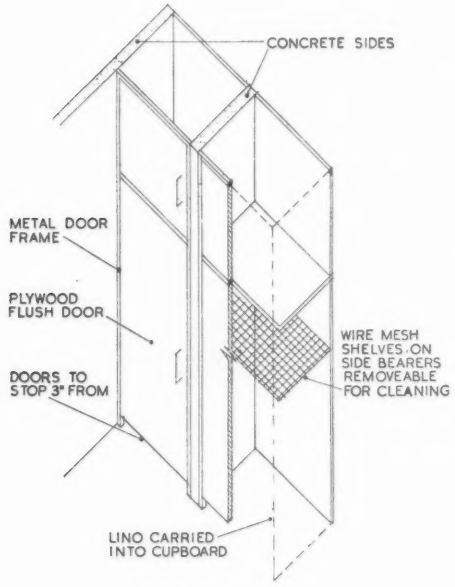
Cupboards.—All cupboards are built up from prefabricated units delivered on the site unassembled and erected as required.

As it is impossible to deliver made-up fitments on the job and obtain an accurate fit in every case, even with mass-production and standardisation, the following design is suggested :

The sides of the cupboards are formed either by partition walls or by pre-cast concrete units the full height of the rooms. Standard metal door frames are fitted as required, and pre-fabricated plywood doors and cupboard backs are fixed in position. It is easier

in this way to make the sides fit to the standard door frames without the common trouble of gaps at the top, etc., which covered by scribing pieces make vermin possible and produce dust traps.

In all cases the cupboard doors do not carry down to the floor, but are stopped 3 in. short ; the linoleum is carried through into the cupboard and thus by removing the lowest shelf it is possible and easy to sweep the cupboard out. In the kitchen the same thing makes allowance for toe-recess.



MISCELLANEOUS

Vermin.—During the demolition of the existing property all woodwork, etc., will be burned on the site, and, if necessary, the area will be sprayed with appropriate insecticide.

Materials from the demolished buildings other than hardcore will not be re-used.

Tenants moving to the new flats must first have their furniture and belongings suitably treated to destroy vermin, and there will be a rule against the introduction of furniture, bedding, etc., into the flats at any time until after inspection by the supervising officers.

The blocks are designed to afford no lodging places for vermin, and almost all materials are vermin proof.

Special attention has been paid to the design of cupboards and fitments to ensure easy cleaning in this respect.

Should any flat become affected, the supervising officer would immediately take steps to isolate the particular flat and have it disinfected with cyanide gas.

Bye-Laws.—The system of construction to be employed, as described elsewhere, is not in accordance with the requirements of the London Building Act with regard to sizes of steelwork for the loads carried. It is suggested, however, that in view of the great advantages of the system no objection should be raised.

The tower portions of the blocks are also in excess of the permissible height. The structure is fireproof, however, and separate escape stairs are provided to all flats above the fifth floor.

Planting.—It is proposed to turf those areas of the site which are not otherwise required for some specific purpose, and to plant a line of trees along the north and south and some portion of the east boundaries to screen the estate from the surrounding roads and to provide more pleasing vistas.

The gardens between the blocks will also be planted with three or four trees at random spacing of suitable types as approved by the Ministry.

The cost of this planting is estimated at approximately £1,000 per acre.

Rehousing.—A programme of building will be drawn up and progress in demolition will be arranged in conjunction with the rebuilding in such a way that after the completion of the first block accommodation will be provided for the displaced inhabitants immediately upon their removal.

At the start of operations the people displaced by the clearance required by the erection of the first block will be provided temporary lodging in the two small derelict factories in the adjacent neighbourhood, which will be conditioned for this purpose.

This temporary measure will be greatly shortened by the rapid constructional methods employed.

It is proposed to commence operations with the block in the south-east corner of the site, as this would apparently displace fewest inhabitants.

On completion, this block will house many more than at first displaced, and clearance for the next will be simplified by the immediate absorption of the displaced inhabitants.

Clearance will proceed westwards from the first block and the power house will be erected in the early stages.

Special Families.—It is not proposed to provide special buildings for families who, due to long existence in slum conditions, require special supervision, as it is considered that the primary aim is to accustom them to normal conditions as quickly as possible.

It is suggested that a section of one of the first blocks to be erected should be set aside for such families under the supervision of a trained and experienced officer.

As the families gradually become used to normal conditions they will be absorbed into other blocks, so far as possible adjoining exemplary tenants, and the general influence will complete the treatment.

POPULATION STATISTICS

NUMBER OF FLATS

The population of the area is given as 3,650.

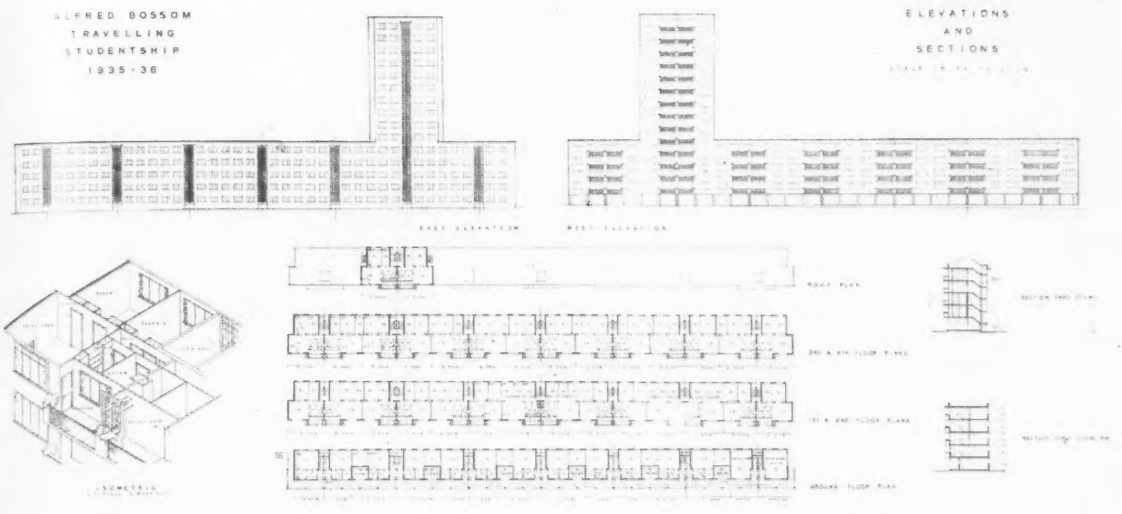
In the district for which this scheme is prepared, i.e., St. Pancras, the total population is approximately 198,000, of which 178,000 are comprised of members of private families.

The number of private families is approximately 56,000, and, therefore, the average number of persons per family is about 3.5.

Assuming that this average holds good for the area in question, the number of separate private families will be 3,650, divided by 3.5, or rather more than 1,000.

Flats to the number of 1,026 have, therefore, been provided, giving the following accommodation :—

THE RECTIFICATION OF A SLUM AREA



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PERCENTAGE OF TYPES OF ACCOMMODATION

Type	*Number*	*Percentage*
1-Room	83	8.0
2-Rooms	153	14.5
3-Rooms	506	49.0
4-Rooms	190	19.5
5-Rooms	94	9.0

These figures are given as the most suitable for the district, but the construction permits elastic planning and variations of the above percentages could be easily obtained.

The reason for the increase in the proportion of 3-room flats over the suggestions given in the programme is partly because such accommodation meets the requirements of the majority of the families, but chiefly because in as many cases as possible the second bedrooms are large enough to accommodate two persons, thus giving room which might otherwise have had to be obtained by a 4-room flat.

The following indicates generally the accommodation provided by the various types of flats :—

1-Room —Single persons.
Married couple ; no children.
Aged couple.
Two bachelors of same sex.

2-Rooms—Married couple ; no children or child under 3.
Aged couple.

3-Rooms—Married couple ; child under 3 and/or 1 other child, or 2 children under 10, or 2 children over 10 of same sex.

4-Rooms—Married couple ; child under 3 and/or 3 or 4 children (sexes over 10 years old to be separated).

5-Rooms—Married couple ; child under 3 and/or 4 or 5 children (sexes over 10 years old to be separated).

Assuming average accommodation in each type the following number of persons would be housed :—

No. 83, 1-Room Flats, at, say, 1½ persons	124
No. 153, 2-Room Flats, at, say, 2 persons	306
No. 506, 3-Room Flats, at, say, 3½ persons	1,771
No. 190, 4-Room Flats, at, say, 5 persons	950
No. 94, 5-Room Flats, at, say, 6 persons	584
	3,735

Accommodation is thus provided for an average population of 3,735, as against the required number of 3,650.

The total number of rooms provided, excluding bathrooms and kitchens, is 3,137, or an average of 1.1 persons per room.

WAGE FIGURES, ETC.

The following are wages normal for various types of workers in the chosen area :—

Boot-making—		
Operatives		54s. weekly
Building Trade—		
Bricklayers	1s. 7d. per hr.	65s.–70s. ,,
Masons	1s. 7½d. ,,	65s.–70s. ,,
Carpenters	1s. 7½d. ,,	65s.–70s. ,,
Slaters	1s. 7d. ,,	65s.–70s. ,,
Plumbers	1s. 7d. ,,	65s.–70s. ,,
Plasterers	1s. 7d. ,,	65s.–70s. ,,
Painters	1s. 6d. ,,	65s. ,,
Labourers	1s. 2½d. ,,	55s.–60s. ,,
Electrical—		
Wiremen	1s. 8¾d. ,,	70s.–75s. ,,
Engineering—		
Fitters		63s. ,,
Moulders		63s. ,,
Labourers		45s. ,,

Furniture—		
Cabinet Makers ..	1s. 7d. per hr.	65s. weekly
Printing—		
Compositors	80s.–90s.	,,
Public Vehicles—		
Drivers	63s.–75s.	,,
Conductors	63s.–75s.	,,
Vehicle Builders—		
Skilled	60s.–65s.	,,
Transport Workers	55s.–65s.	,,

The average labourer earns about £2 5s. per week in continuous employment, but this is reduced to an average of about 35s. per week if on seasonal employment.

The average figure for the artisan is estimated at between £2 and £3, including any "dole" during times of unemployment.

Household Budget

A typical household budget for an average family of four persons occupying a 3-room flat is as follows :—

Rent	9s. 5d.
Clothing	6s. 0d.
Food	27s. 0d.
Light and heating (electricity at special rate)	3s. 6d.
Fares	2s. 0d.
Laundry (communal laundry charge) ..	6d.
	48s. 5d.
Average weekly income ..	55s. 0d.
Surplus	6s. 7d.

SITE AREA ALLOCATION

Areas of Ground Allocated

(*a*) Built on—		
No. 11 Blocks area	10,304 sq. ft. ..	113,344 sq. ft.
No. 1 Block area	8,508 ,, ..	8,508 ,,
		121,852 ,,
Power Station		3,000 ,,
School, Crèche, etc.		6,000 ,,
Estate Office, etc.		2,250 ,,
		133,102 ,,
(*b*) Recreation (not including Rest Gardens)—		
Sports Arena, Tennis Courts, Bowling Green		100,500 ,,
Children's Playground, Pool		25,500 ,,
Allotments		15,000 ,,
		141,000 ,,
(*c*) Roads—		
Main Estate Road, 1,900 ft. × 15 ft. wide		28,500 ,,
Pedestrian and Service Paths		28,000 ,,
		56,500 ,,
(*d*) Planting (including Rest Gardens) ..		543,478 ,,

Summary

(*a*) Built on ..	133,102 sq. ft. ..	15 per cent.
(*b*) Recreation	141,000 ,, ..	16 ,,
(*c*) Roads ..	56,500 ,, ..	6 ,,
(*d*) Planting	543,478 ,, ..	63 ,,
Total Open Space ..	..	85 per cent.

COST

Estimate of Cost

It has not been possible in preparing these figures to ensure absolute exactness on account of the new principle of construction involved, but existing work and projects have been studied as a basis and suitable allowances have been made.

(1) Cost of Land—	
18 acres at £15,000	£270,000
(2) Cost of Building—	
No. 10 Blocks of 88 Flats—	
640,000 cu. ft. at 1s. 0½d.	332,500
No. 1 Block of 78 Flats—	
562,800 cu. ft. at 1s. 0½d.	29,412
No. 1 Block of 68 Flats—	
510,000 cu. ft. at 1s.	25,500
	£387,412
School, etc.—	
60,000 cu. ft. at 10d.	2,400
Estate Office, etc.—	
32,500 cu. ft. at 10d.	1,284
	£391,096
Demolition at 6d. per sq. ft.	21,000
Roads	1,500
Architects, Consultants—	
Fees at 6 per cent., or say 1d. per cube	23,000
	£436,596
Hot Water and Central Heating Supply and Drainage at 10 per cent. plus £10,000 for Power House	53,000
Planting and Lay-out at 6d. per sq. ft. ..	17,000
	£506,596

Revenue

(1) Rentals—

Flat	*No.*	*Rental p.a.*	
1-Room	83	£21 0 0	£1,743
2-Room	153	£23 5 0	3,557
3-Room	506	£24 10 0	12,397
4-Room	190	£29 10 0	5,510
5-Room	94	£31 0 0	2,914
			£26,216

(2) Outgoings—	
Maintenance Charges at 40 per cent. Gross Income	£10,460
Sinking Fund for Repayment of Loans at 3 per cent. on Total Cost	£22,688

Summary

Total Cost (Including land)	£776,596
Gross income per annum	£26,216
Net income per annum	£15,540
Sinking fund per annum	£22,688
Deficit per annum	£7,148
Normal Government Subsidy—Housing Act, 1935, Section 31, at £6 per flat per annum	£6,156
Subsidy required to make scheme possible, say £7 per flat per annum	£7,182

Increase of subsidy of £1 per flat per annum over normal Government subsidy of £6 is required.	
Percentage of gross income to outlay ..	3.5 p.c. gain
Percentage of net income to outlay (allowing for Sinking Fund and not including subsidy)	0.9 p.c. loss

N.B.—The rentals taken in the above calculations are from 2s. to 3s. less per week than the present average for the district, but they are taken as being more economic to the inhabitants and nearer the standard which should be achieved.

STUDY

The district chosen for the preparation of this scheme is the Borough of St. Pancras.

The competitor lives in this borough and has studied at first hand existing conditions of life and the slum clearance work carried out by the L.C.C. and other bodies.

Particular study has also been made of work carried out by the L.C.C. in other districts and other recent schemes and projects, in England and the Continent.

Reference has also been made to the following publications in whole or extract :—

Housing Estate Statistics. L.C.C.
Government Publications on Housing, etc.
Slum, Howard Marshall.
The Home, Mitchison (American Housing ; standardisation).
Slum Clearance and Rehousing.
Housing and Slum Clearance in London.
Survey of London Life and Labour.
Board of Trade Statistics.

And recent articles in the professional Press.

THE ARCHITECT AND THE DEVELOPMENT OF BUILDING TECHNIQUE

DISCUSSION AT THE INFORMAL GENERAL MEETING ON WEDNESDAY, 12 FEBRUARY

At the informal general meeting held on Wednesday, 12 February, junior members discussed the development of building technique.

Miss Justin Blanco White opened by describing the significance of modern technique and the prejudices and restrictions which now hampered its necessary understanding and development. Architects generally, she suggested, were not aware of the complexities of this problem, and did not take a sufficiently live interest in the difficulties that beset the building trade.

After this it was regrettable that so many speakers should have entirely departed from the subject of discussion.

It was hoped that Sir Owen Williams, who spoke next, would speak on the present extent and effects of standardisation and pre-fabrications, but instead he appealed to architects to deal in facts, to avoid prejudice and " the personal vanity of the designer," who must deal with realities ; upon his point of view the development of technique depended very largely. This present age was probably the least standardised that had ever been. The only great problem still unsolved was how to provide shelter and comfort for man at a price he could afford to pay, implying that standardisation and prefabrication might be two ways of achieving this. The designer's business was to supply needs with the minimum expense of labour and money. The consequent economic and social problems that might be expected to follow were not the designer's concern but the concern of the economist, the social administrator and the politician.

Mr. George Hicks, M.P., disagreed. The architect should study all sides of the question of the use of new methods and materials in building. He had a position of great responsibility, his standing in the building industry was higher than it had ever been before ; and his power to help was greater. He referred to the effects within the industry of the growth of new classes of specialist workmen. He pointed out that the real craftsman, now in danger of being submerged, was quite capable of doing the work of these " specialists." Social service was, or should be, the aim of the industry. Architects, whom he described as the intelligentsia of the industry, could do it great service by studying its organisation from within and by controlling the selection and use of materials.

Miss Margaret Church described the difficulties put in the way of the development of building technique by legislation, by local authorities, but in such a way as to suggest that the point of view of the Councillor and the Surveyor were merely malicious. Development, she said, could only follow reasonable and up-to-date legislation.

Mr. Shapiro went further and suggested that development could only follow upon the rationalisation of society.

Some irrelevant discussion followed until Mr. Summerson spoke. He said that now, probably for the first time, we could recognise the existence of technique as a coherent and definite expression of modern thought, and gave as three instances—the steam turbine, the automobile and the reinforced concrete beam. These things, he said, have a quality apart from the facts of their design and existence, but he was alarmed by the conflict between that quality and the structure of modern society.

Mr. Cox talked about education.

Mr. Braddock suggested that architects would be forced to specialise more and more widely than they do at present.

The meeting closed after Sir Owen Williams had replied.

During the two hours or thereabouts of the meeting a great deal was said that had nothing whatever to do with the subject under discussion. Few of the speakers appeared to have any precise and definite idea of what is implied by the words " The Development of Building Technique." It was all too vague. Those who complained of prejudice on the part of others seemed to suffer themselves from the same complaint.

It is unfortunate when such a valuable opportunity for free and open discussion does not produce more valuable results.

"EVERYDAY THINGS"

The R.I.B.A. Exhibition

On Wednesday, 19 February, the Earl of Bessborough, P.C., G.C.V.O., opened the Exhibition of "Everyday Things" in the R.I.B.A. galleries. The ceremony was to have been performed by the Earl of Derby, but he had to attend King Edward VIII on His Majesty's visit to the British Industries Fair.

The Exhibition, which is the principal one of the year organised by the Exhibition Sub-Committee, has three aims. These are: (1) To show the public that inexpensive mass-produced objects for household and similar use can be of good design as well as efficient. (2) To show that the minor fittings, equipment and furnishing of buildings are important factors in everyday life. (3) To show that production by machine processes of such objects for the community is an important field of study for designers.

In laying down the regulations governing the Exhibition, the Committee have had in mind the words of King Edward VIII, when Prince of Wales, in his speech at the R.I.B.A. Centenary Banquet. The King said: "As an Institute you are charged with the great and honourable duty of educating the people of your country to better living."

It is believed that never before has an exhibition been held that consisted solely of household objects and equipment selected on a design basis from the inexpensive mass-produced class. All the things shown are made for sale in quantities and can be bought in shops. In every case the retail prices are given in the catalogue. All goods are of British manufacture. In excluding luxury goods the Committee set as an approximate upper limit the contents of a house costing £1,500.

The Exhibition inevitably reveals the architect in his capacity as selector. The things shown are of kinds which the architect normally selects both for his own and for his clients' houses. It also, in some cases, shows him as actual designer, either as a practising architect occasionally designing for industry, or as an architect-trained man or woman working solely for the trade. More fully, the demands made on manufacturers by architects from time to time are expressed in every section of the Exhibition.

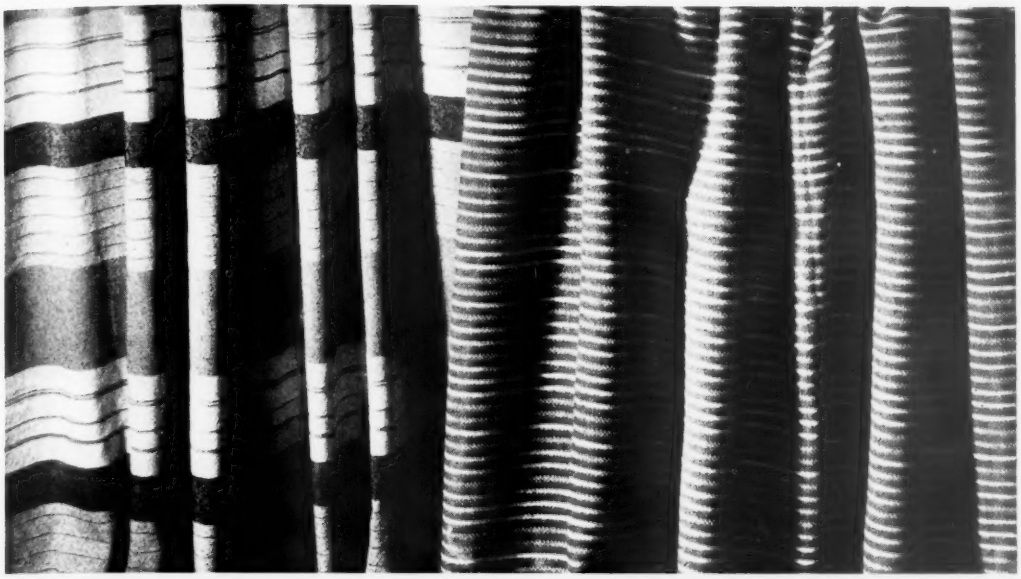
There are more than two thousand exhibits organised in the following sections:—Furniture, Silverware and Cutlery, Plastics, Glassware, China, Dressing-Table Equipment, Church Furnishings, Textiles, Kitchen Equipment, Building Equipment, Building Finishes.

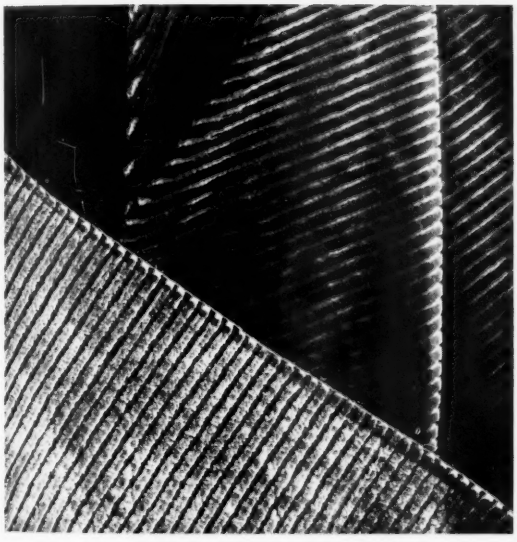
The Exhibition will be open until Saturday, 14 March from 10 a.m. to 8 p.m., Saturdays 5 p.m. After the London show it is to go on tour of the principal provincial centres, beginning with Bristol and Hull.

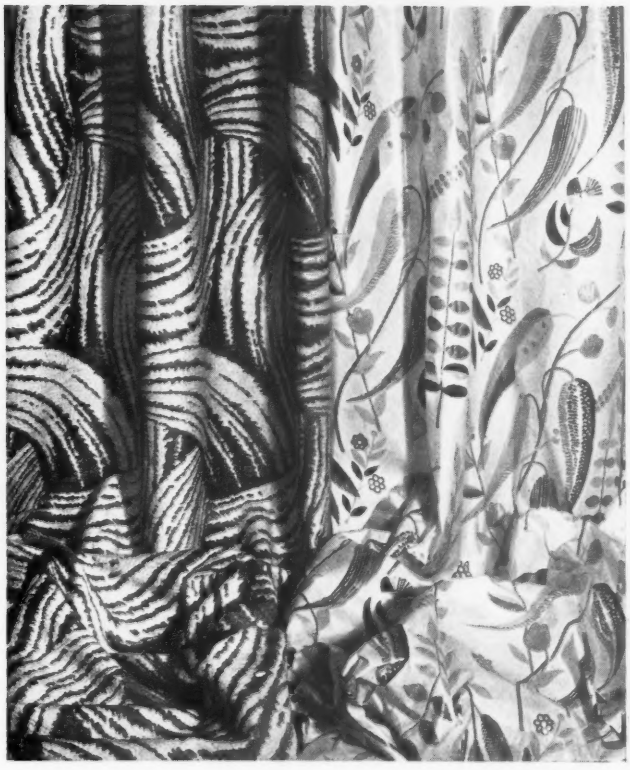
As we go to press the newspaper criticisms are being received. Almost without exception they are full of praise, both for the idea of the exhibition and for its presentation. In the next number of the JOURNAL we intend printing our own review, which is being written by Mr. John Gloag, the speeches at the opening ceremony, and extracts from reviews in the general press.

The Section Organisers and their collaborators were:—*Chairman:* H. S. Goodhart-Rendel [*F.*]; Miss J. M. Albery [*A.*], M. L. Anderson, E. W. Armstrong [*F.*], D. H. Beaty-Pownall [*A.*], Mrs. Stephen Bone, David Booth [*A.*], Mrs. Darcy Braddell, H. Braddock [*A.*], D. L. Bridgwater [*A.*], Miss Margaret Brodie, N. F. Cachemaille-Day [*F.*], Noel Carrington, H. P. Crallan [*A.*], T. G. Cullen [*S.*], H. L. Curtis [*A.*], J. Murray Easton [*F.*], Miss Ruth Ellis [*A.*], R. E. Enthoven [*F.*], E. Maxwell Fry [*A.*], John Gloag, Walter M. Goodesmith [*A.*], John Grey [*F.*], C. C. Handisyde [*A.*], R. Henniker [*A.*], J. L. Howe [*A.*], G. A. Jellicoe [*F.*], A. W. Kenyon [*F.*], Miss J. G. Ledeboer [*A.*], J. E. Lewis, Raymond McGrath [*A.*], W. H. McNicol [*A.*], T. Mitchell [*A.*], C. St. C. R. Oakes [*A.*], S. Rowland Pierce [*F.*], Mrs. Janet Pott [*A.*], Miss Betty Scott [*A.*], G. F. C. Stegmann [*A.*], E. V. Tibbits [*S.*], N. C. Westwood [*S.*], L. W. Thornton White [*A.*], G. Grey Wornum [*F.*], Mrs. Grey Wornum, F. R. Yerbury [*Hon. A.*], F. R. S. Yorke [*A.*]; *Hon. Secretaries:* L. H. Bucknell [*F.*], R. A. Duncan [*A.*].

Copies of the Exhibition Catalogue can be obtained from the Institute, 1s. 6d. post free. The Catalogue contains complete descriptions of all the exhibits with their prices and photographs of a large number of the exhibits.







Top: Woven materials. Gordon Russell Ltd.
Bottom left: Striped Velvet. Edinburgh Weavers
Bottom right: Printed material. Turnbull & Stockdale Ltd.

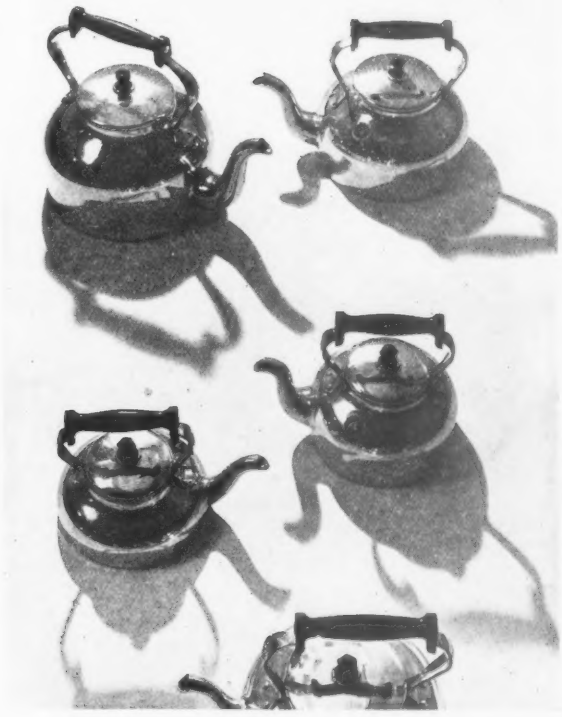
Top: Dinner Service, "Banquet" pattern. Pountney and Co. Ltd.

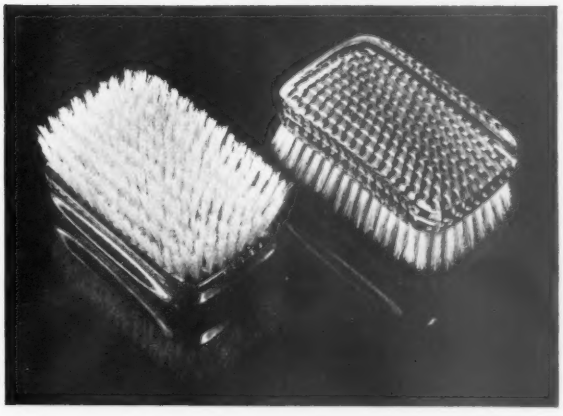
Middle left: Vases. Doulton & Co., Ltd.

Bootom left: Dinner Service in Victorian Sovereign Plain. Johnson Bros. (Hanley) Ltd.

Right: Breakfast-in-Bed Set. Josiah Wedgwood and Sons Ltd.

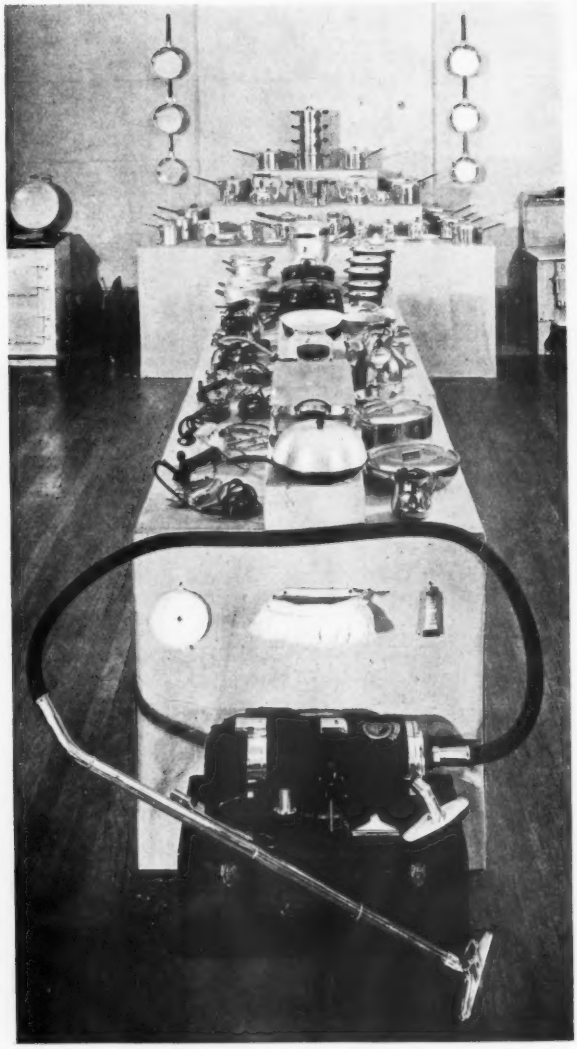
Top left: Silver Cigarette Canister. Mappin & Webb Ltd.
Ashtray. Wakely & Wheeler. Inkpot. H. G. Murphy.
Middle left: Pewter Coffee Pot, Cream Jug and Sugar Basin, designed by Harold Stabler. James Dixon & Sons
Bottom left: Jug and Glass. Stevens & Williams Ltd.

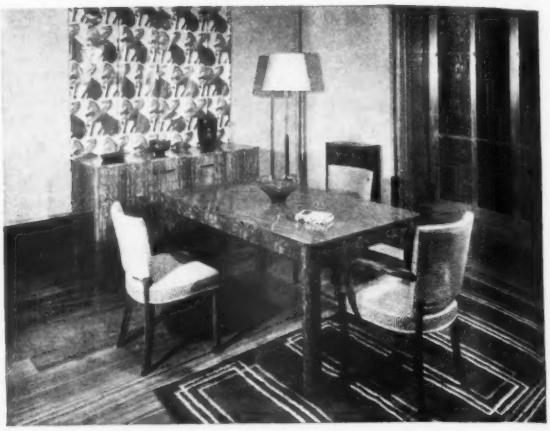


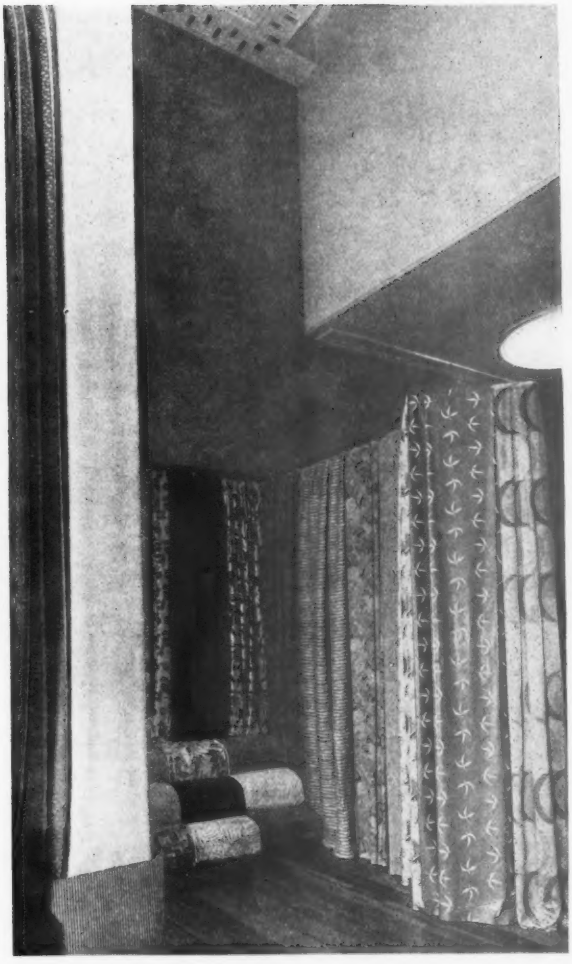


Top right: Kettles. Hague & Mackenzie Ltd.
Bottom right: Synthetic Glass Military Brushes. Rigby Battcock Ltd.

Left: General view of the Kitchen Equipment section
Top right: Dining room suite. Betty Joel, Ltd.
Bottom right: A corner of the Building Equipment section







Top left: A part of the China section
Bottom left: A part of the Furniture section
Right: A part of the Textile section

Top left: Cocktail Shaker. Designed by Lawson Clark. Thomas de la Rue & Co. Ltd. for Lawsons Ltd.
Lower left: Knives and Cook's Fork. George Butler & Co. Ltd.
Right: Aluminium Omelette Pans. Hague & Mackenzie Ltd.
Bottom: Silver Mugs and Tankards

REVIEW OF CONSTRUCTION AND MATERIALS

This series is compiled from all sources contributing technical information of use to architects. These sources are principally the many research bodies, both official and industrial, individual experts and the R.I.B.A. Science Standing Committee. Every effort is made to ensure that the information given shall be as accurate and authoritative as possible. Questions are invited from readers on matters covered by this section; they should be addressed to the Technical Editor. The following are addresses and telephone numbers which are likely to be of use to those members seeking technical information. There are many other bodies dealing with specialised branches of research whose addresses can be obtained from the Technical Editor. We would remind readers that these bodies exist for the service of Architects and the Building Industry and are always pleased to answer enquiries.

The Director, The Building Research Station, Garston, Nr. Watford, Herts. Telegrams: "Research Phone Watford." Office hours, 9.30 to 5.30. Saturdays 9 to 12.30.

The Director, The Forest Products Research Laboratory, Princes Risborough, Bucks. Telephone: Princes Risborough 101. Telegrams: "Timberlab Princes Risborough." Office hours, 9.15 to 5.30. Saturdays 9.15 to 12.

The Director, The British Standards Institution, 28 Victoria Street, London, S.W.1. Telephone: Victoria 3127 and 3128. Telegrams: "Standards Sowest London." Office hours, 9.30 to 5. Saturdays 9.30 to 12.30.

The Technical Manager, The Building Centre Ltd., 158 New Bond Street. London W.1. Telephone: Regent 2701, 2705. Office hours, 10 to 6. Saturdays 10 to 1.

UNIT WEIGHTS OF BUILDING MATERIALS

THE NEW BRITISH STANDARD SCHEDULE*

By Alfred H. Barnes [*F*].

The weights of building materials which one "turns up" in the table book for the purpose of calculating dead loads are accepted, without thought, as the correct weights of the materials in question. If it were not so one might be tempted to compare one book with another, and then it might be found that there is a distinct difference of opinion or, equally surprising, the figures would be found to coincide to the last pound. In fact, on further comparisons the idea must obtrude itself that the figures quoted do not represent the corroboration of many witnesses, but rather the transmission of a tradition.

Present-day economy in design and the reduction of materials to a minimum demand that, as far as possible, the figures used in calculation should approximate to actual weights; and, again, economy of time and trouble in checking calculations points to the advantage of establishing a standard of such approximate figures so that we all may work on a common basis.

With these two objects in view, the Science Standing Committee early in 1931 requested the British Standards Institution to undertake the work of producing a schedule of standard unit weights derived from direct experiment. The B.S.I. was considered the ideal organisation for carrying out the work, not only on account of its divergent avenues of information, but by the fact that the data when issued would be authoritative and "standard."

The extent of the undertaking may be gauged from the fact that the work occupied the committee, set up for the purpose by the British Standards Institution, nearly five years. A reference to the schedule (and every architect should possess a copy) will disclose that the individual investigation of the number of different materials dealt with by actual experiment fully warranted the time occupied.

In carrying out the necessary research the Institution had the advantage of the co-operation of the Building Research Station, the Forest Products Research Station, the Building Centre, the British Iron and Steel Federation, the British Non-Ferrous Metals Research Association and the appropriate trade organisations.

Naturally, from the point of view of the British Standards Institution, the object of the schedule is standardisation of working data rather than that of furnishing more accurate tables of the weights of materials, which in any case must necessarily vary with different specimens and under different conditions. To quote from the foreword to the schedule:—

> "In arriving at the unit weight of a building material it is often found that not only do considerable differences exist between the weights of different specimens of a given material, but between the weights of the same specimens under different conditions. The weights of such materials as timber and brickwork, for instance, are greatly influenced by moisture content. It is not surprising, therefore, that the weights given in various books of reference do not always agree, and that in those cases where absolute agreement does exist such unanimity is often attributable to coincidence or to the figures in question having emanated from a common source.
>
> "The object of the following schedule is not so much to afford more accurate data for calculations, but to standardise the data employed in order to avoid the confusion which arises when comparing calculations based on differing data.
>
> "Nevertheless, in preparing this schedule every care has been exercised to ensure that the weights as standardised are those of fair average materials of normal composition or structure and where indicated 'as laid' are fixed in the usual manner. The figures given have been derived at first hand from actual tests or have been otherwise checked."

The architect will find that for his purpose an important part of the publication is the appendix, which augments the "standard weights" by giving actual weights in differing circumstances. For example, in calculating the resistance moment of a brick wall in relation to (say) wind pressure, where safety requires the weight of dry brickwork to be taken into account, or, on the other hand, in calculating the

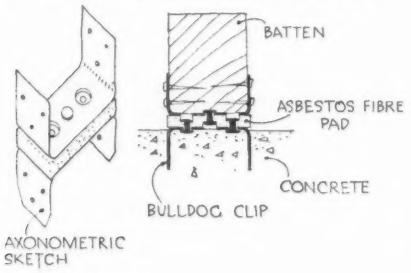
* B.S.S. 648—1935. Price 2s. 2d. post free from the British Standards Institution, 28 Victoria Street, S.W.1.

bending moment of a bressummer bearing an external wall, where the wet state is the condition demanding consideration, the necessary information is to be found in the appendix.

Apart from any other uses, the British Standard Schedule of Unit Weights of Building Materials is a very handy and reliable table book.

ACOUSTIC FLOOR CLIPS

When this series of articles was started in the JOURNAL *the editors stated that they were prepared to publish reports, or summaries of them, on proprietary materials issued by Government research organisations. It will be clear that such a report is the best possible guarantee to architects—apart from British Standard Specification—that a material will perform what is claimed for it. Below we publish a report by the National Physical Laboratory on acoustic floor clips submitted for test by the Adamite Company, Ltd. The wording of this article has been agreed by the Director of the National Physical Laboratory and by the proprietors of the clip.*



GENERAL REMARKS

The purpose of these acoustic floor clips is to reduce the transference of sound from an upper wooden floor on battens to the structural fire-resisting floor on which it is carried, and thence to the room below. The report indicates that impact noises on the surface of the wooden floor are relatively more troublesome than air-borne noises; the tests were therefore confined to discovering the relative reduction of sound travelling through (*a*) a board and batten floor on a concrete structural floor, the battens being held in standard "Bulldog" floor clips; (*b*) a similar floor with acoustic "Bulldog" floor clips; (*c*) a similar floor with standard "Bulldog" clips and a ¼-inch acoustic blanket under the boards. The standard and acoustic clips are similar in structure except that the latter has a pad of asbestos type material so fixed between the upper and lower halves that there is no metallic continuity through the clip. The report shows that the acoustic clips gave the best results.

We are informed by the Adamite Company, Ltd., that three types of clip are marketed. The first, which is the one tested by the N.P.L., is for use with hollow-tile or solid concrete floors; the second is for use with precast floors; the third is for use between structural joists and superimposed battens to which boards are nailed. We are also informed that the cost is just under 2s. per square yard extra, with clips at 16-inch centres and battens at 14-inch centres.

THE REPORT

The following is the report by the Physics Department of the National Physical Laboratory, Teddington (Ref. S.285, 6 December, 1935):—

Object of the Tests

The object of the measurements was to measure the relative insulating values against impact noises of acoustic floor clips when used as supports for a wooden floor above a solid concrete floor. To provide a standard of comparison, measurements were also made when the insulating clips were replaced by ordinary "Bulldog" clips devoid of insulating material.

Description of Floors and Clips

For the purpose of the tests two reinforced concrete floors were supplied. One of the floors was fitted with the un-insulated clips, while the other floor was fitted with acoustic clips. Each floor measured 8 feet by 5 feet by 4 inches thick. The wooden floor consisted of floor boards about 5¼ inches wide and ¾ inch thick. These were nailed to 2 inches by 2 inches wood fillets fixed to the concrete floor by a specified number of the particular type of floor clip to be tested.

The acoustic clip depended for its insulation on a pad of asbestos 2 inches by 1¼ inches by ⅜ inch thick.

Each wooden floor rested on four fillets parallel to the long side of the floor, each fillet being supported by four clips about 2½ feet apart. The spacing between the centres of adjacent fillets was approximately 16 inches when the "Bulldog" clips were used and 13, 19 and 14 inches for the acoustic clips.

A modification of the floor with the "non-insulating" clips was also tested in which a continuous acoustic blanket approximately ¼ inch thick was placed between the fillets and the floor boards. The blanket was nailed to the upper side of the fillets and hung freely from them.

Description of Test

The concrete floor was bedded down horizontally on lime mortar on a heavy rectangular ferro-concrete frame surrounding a test aperture of dimensions about 6 feet 4 inches by 3 feet 8 inches. A rubber seal served to insulate the frame from the floor of the test room and also to make an airtight joint. Any crevices were carefully sealed so that the amount of air-borne sound transmitted from above to below the test floor was reduced to a minimum.

Definite blows, approximating in energy to average footfalls, were delivered four times per second to the upper surface of the wooden floor by a set of four motor-driven hammers. Each hammer weighed about 1¾ lbs. and was raised in turn through a height of about 1¾ inches, being afterwards allowed to fall upon the test floor under its own weight.

Two alternative types of hammer head were employed: one hard (of Keramot hard fibre) and the other soft (of rubber). The impact machine stood upon rubber feet near the middle of the wooden floor, the line of blows being diagonally across the floor. Measurements of the sound generated below the floor were made by a team of seven observers using a subjective meter of the Barkhausen type. Preliminary tests confirmed that the sound generated below the floor due to the impact noise predominated over the air-borne sound transmitted through the floor from the room above.

Results

The average results are given in the table below. In columns 3 and 4 is given the loudness, in phons, of the noise measured below each test floor for the specified kind of blow, and in columns 5 and 6 the increase in insulation against impact sounds arising from the use of the insulated floor clips.

Table of relative insulating values against impact noises of acoustic floor clips.

Impact.—Due to machine delivering four standardised blows per second. *Scale of equivalent loudness.*—The equivalent loudness of a 1,000-cycle plane progressive sound wave is n phons when the sound intensity is n decibels above a zero corresponding to an acoustical pressure of 0.0002 dyne per sq. cm.

Description of floor		Equivalent loudness of sound heard in room below test floor (subjective meter)		Increase in insulation above that of floor (1) with uninsulated clips	
		Impact machine shod with		Impact machine shod with	
Floor	Type of Clip	Keramot (hard fibre)	Rubber	Keramot (hard fibre)	Rubber
An upper ¾-inch wood floor (8 feet by 5 feet) nailed to 4 wood fillets (2 inches by 2 inches) each fixed by 4 clips to a lower reinforced concrete floor 4 inches thick	(1) Ordinary "Bulldog" uninsulated clips	phons 88	phons 81	phons —	phons —
	(2) As in (1) but with ¼-inch acoustic blanket between fillets and wood floor	85	79	3	2
	(3) Acoustic clips insulated with asbestos pads 2 inches by 1¼ inches by ⅜ inch thick	81	68	7	13

SOME TECHNICAL PAMPHLETS

STONE

Specification of Stone. Report No. 6. Prepared by the Manchester Architects' and Builders' Consultative Board 1935.

For more than five years a joint committee of architects and builders in Manchester has been considering technical problems as they apply to building in and around the city. Their sixth booklet—on "Stone"—was published in revised form last year. It is a survey of the stones used for masonry in Manchester and includes many that are unfamiliar to the South Country. A section on "Lake District Masonry" is of particular interest as it describes in some detail what must be the unique local craft that employs large thin bedded stones in dry walling to resist an abnormal (in this country) rainfall. The term "built watershot" for stones laid dry and sloping outwards is interesting and unfamiliar. If we may make one criticism it is that the section on Portland stone should have been correlated with the recent work on this material at the Building Research Station.

The Committee jointly represents the Manchester Society of Architects and the Manchester, Salford and District Buliding Trades Employers' Association; previous publications were on Timber Specification, Cement Concrete Specification, Stone (first issue), Painting, Slating and Roof Tiling. Copies can be obtained from Mr. James Denver, 2 Conyngham Road, Victoria Park, Manchester 14. Price 1s.

STEELWORK CALCULATIONS

Report on a Standard Method for the Preparation of Calculations relating to Steelwork in Buildings. Published by the Institution of Structural Engineers. Price 6d.

The purpose and scope of this pamphlet are best indicated by quotations from it:

> "The Institution of Structural Engineers has recently given consideration to the methods adopted by engineers and contractors in preparing and tabulating calculations relating to steelwork in buildings."
>
> "Variations exist in the methods adopted. These methods, where carried out by competent engineers, lead to reliable results, but they often entail unnecessary labour and are not always embodied in a methodical statement such as would facilitate checking and comparison."
>
> "An endeavour has therefore been made to set out in this Report a series of recommendations which may lead to a greater measure of uniformity and to improvements in general practice in the preparation of calculations."
>
> "This Report should be read in conjunction with the Institution's Report on Steelwork in Buildings, Part I, Loads and Stresses, 1933, in which definitions of all the terms and symbols will be found."

The Report begins with details of a standardised system of identification marks and lettering on steelwork drawings and goes on to describe data sheets for beams, pillars, slab-bases and grillages. Examples of typical sheets are given.

LIFTS AND ESCALATORS

Code of Practice for the Installation of Lifts and Escalators Published by the Building Industries National Council. Price 1s. 3d.

Accustomed as we are to safety regulations governing the design and use of almost all buildings and machinery, it is a little surprising that no regulations exist in this country controlling the design and installation of lifts and escalators in buildings, except such as are connected with the spread of fire. It says much for the foresight of the manufacturers that lift accidents in this country are very infrequent and usually traceable to carelessness or gross misuse. Nevertheless the drawing up of a Code of Practice in lift and escalator installations for the guidance of manufacturers and architects should prove of service if only to standardise existing safety measures and to settle terminology. It has the further advantage that regulation of products for public good by the industry concerned is generally better than regulation by government. This useful work has been done by the Advisory Committee on Building Acts and Bye-laws of the B.I.N.C. and has the approval of the insurance companies.

The Code is mainly concerned with matters that come solely within the scope of the manufacturers; but there are some items, mainly structural, which are the concern of the architect. There is a useful sectional diagram of a lift well on which are marked heights and clearances; these vary according to lift speeds, types of safety gear, etc., a table of exact dimensions being given. Architects should have a

copy of this Code in their offices if only as a glossary of the technical terms used in the estimates of lift manufacturers.

REINFORCED CONCRETE TENEMENTS

Working-Class Domestic Flats in Reinforced Concrete. Report on Competition for Designs for Five-Storey Flats organised by the Cement Marketing Company, Ltd.

As a final flourish to their recent competition, the Cement Marketing Company have published a booklet which is the kind of summing up which one would like to see made in all competitions. The contents include a short statement of objects and conditions, the assessor's report, a review by Mr. P. Morton Shand, illustrations and reports of the premiated designs and some selected perspectives of other designs. The competition was reviewed in these pages at the time when the award was announced, therefore it is not necessary here to do more than point out that the competition had as objective, research into the possibilities of reinforced concrete as a material for building tenements; it had the secondary result of producing much new thought on tenement planning. The principal structural problems, apart from cost, were those of providing an economical and resistant external finish, adequate heat insulation and reasonable defence against noise. Some ingenious solutions were produced and it is to be hoped that further research, preferably at full scale, will be made to determine their adequacy. The winning design came out at as low a cost as £94 per habitable room; if reasonable living conditions can be obtained with this cost the competition should prove of great value.

SCHOOL BUILDING

Education in Essex 1928-1935. Report of the Essex Education Committee. Copies obtainable from the Director of Education, County Offices, Chelmsford. Price 2s.

This is a very full report of the activities of the Essex Education Committee during the last seven years. Its main interest to us is that it contains plans and photographs of the latest school buildings by Mr. John Stuart [*F.*], the County Architect, and also some statistics which may prove useful to other school architects. We regret that the Committee did not think fit to say in the book by what organisation the buildings were designed and erected, or even to mention Mr. Stuart by name. But this anonymity of the responsible staff is complete as not even the name of the Director of Education is given. Nevertheless, we suspect that much of the Report came from the pens of the staff.

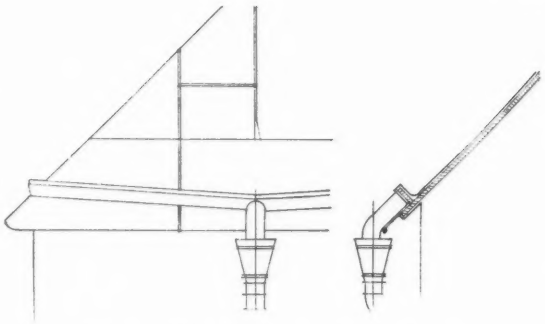
COPPER

Copper for Architecture in Sweden and Denmark. Issued by the Copper Development Association.

This is a record of a tour to Sweden and Denmark by two members of the C.D.A. staff in search of information on the architectural and technical uses of copper. Both countries have a firmly established tradition of use in the material, particularly for external work.

In Sweden it is customary to roof almost all buildings of large size and permanence with copper, in spite of the fact that costs are slightly less favourable than in England. Apart also from turrets, finals, etc., it is used for gutters and downpipes in all good class work. Its employment is allied to the old craft traditions rather than to modern "functional" design. Denmark, on the other hand, shows a tendency to use it in new ways, as, for example, sheathing for vertical wall surfaces.

The sketch here reproduced is taken from a sheet of details.



Detail of combined Snowboard and Gutter from Sweden

It shows an unusual gutter arrangement which, though the letterpress does not say so, is designed to prevent masses of snow from sliding off the roof and to allow for its gradual melting from the underside. Falling masses of snow can inflict severe, even fatal, injuries on persons on whom they fall, and this form of gutter is an obvious necessity in northern climates where buildings with eaves abut on street frontages. It is a form only possible in metal roofing.

There is much to study in this booklet; some things in it are quite unknown in this country and yet are clearly parts of an old craft tradition in copper work. The make-up of the booklet is original and very attractive, both in typography and the layout of the illustration pages. The cover is part of the map of Stockholm, overprinted with the title.

ASPHALT

Trinidad Lake Asphalt, by A. W. Attwooll, M.Inst.P.T., and D. C. Broome, F.C.S., M.Inst.P.T. The Baynard Press. Issued by the Limmer and Trinidad Lake Asphalt Company, Ltd.

This is a most attractive little book about that phenomenon the Trinidad asphalt lake. The earliest known record of it is in the diary of Sir Walter Raleigh, who visited it in 1595, and said . . . "there is that abundance of stone pitch, that all the ships of the world may be therewith loden from thence." It attracted the attention of that eccentric genius Thomas Cochrane, Earl of Dundonald, who suggested a wide and at that time extraordinary series of uses for the material.

After discussion of theories as to its origin, the authors go on to describe how the asphalt is removed and refined. Borings show its maximum depth to be about 300 feet, and although since 1888, when it was first worked on a large scale, no less than five and a half million tons of asphalt have been removed, the level of the lake has not appreciably diminished. Although the surface of the lake is solid enough to support a light railway, the slow movement of the mass of asphalt necessitates daily relaying of the tracks.

The main purpose of this book is not, however, to amuse the reader with entertaining facts. It is discussion of the composition and characteristics of lake asphalt, and is really written for specialists, the authors being members of the laboratory staff of the Limmer and Trinidad Lake Asphalt Company. The edition is therefore a small one, and the book has not been put into general circulation. The company will, however, send a copy to anyone interested in the technique of asphalt, though the edition is becoming exhausted.

Book Reviews

MODERN HOUSING*—A REMARKABLE SURVEY

Miss Bauer has devoted her book mainly to the consideration of actual conditions and achievements in housing of a number of countries, with an analysis of the various forces that have brought about those conditions and of the means whereby the achievements have been effected. Such an analysis is of great value, first in shedding light on the development of the movement during the last century, and, secondly, in indicating the objects and ultimate effects of the housing measures of the various countries under consideration. To present the essential facts clearly is not easy, and can rarely have been done so well ; for housing is no longer merely a question of creating a Utopia, or designing a model dwelling. Miss Bauer rightly sees it as a complex problem which cannot be dissociated from the historical and contemporary background formed by the interaction of social, economic, political and moral influences. It is from this point of view that the book is written, and in spite of the bewildering nature of the problem Miss Bauer succeeds more definitely than any previous writer in giving a vivid account of the growth of the "housing problem" in Europe and America, and of its characteristics in each country now and in the past. Her argument is lucid and presented with a hard-headed sense of the practical implications of the problem that never lets her down. This cannot be said of many of the books that have been written on the same subject, and is perhaps due to a fact that becomes evident on reading this one—namely, that Miss Bauer has first-hand knowledge of the many housing schemes she describes, and has read very widely in the enormous bibliography of the subject.

The first two parts of the book are historical, and are in many ways the most interesting. Under the general titles of "Nineteenth-Century Cities :—A Record of Failure" and "Gathering Forces" they give a clear impression of the growth of this new movement.

In the first place is a description of the three "deposits" found in most cities, medieval, neo-classic and nineteenth century, the latter with its terrible conditions of overcrowding in the cities and its miles of "bye-law" streets in the suburbs to house the millions called forth by the industrial revolution.

The nineteenth century is divided into three parts, the first of chaotic concentration, the second of legalised congestion, and the third of unregulated speculative expansion. The first created new minimum standards of space and amenity which forced up the prices of land in anticipation of the density possible under the new standards, and the second crystallized these standards, with an increase in the actual cost of the dwelling in relation to income. The third period is treated in detail with reference to America and several European countries, and shows how speculation and increase in the cost of land and the houses brought about a rise in the rental scale. Industrial methods did not reduce the cost of the house, and the rise in wages did not catch up with the rise in rentals. So new slums are formed, and, in the words of Miss Bauer, "the fringe of newest and for the moment most respectable dwellings was pushed farther and farther out ; each year it moved, like an army, to new encampments. And in between the fringe and nucleus all was chaos." A very interesting chapter, entitled "Victorian Mind and Matter," brings the first part to an end with an analysis of the contemporary point of view with regard to housing. The smug self-satisfaction of the landowners and employers of labour, and the lack of sensibility on the part of the citizens of the nineteenth century as a whole, are blamed for the continued existence of the evils, an argument which Miss Bauer develops with understanding and wit. In this period, however, is found the growth of those ideas working against the current which are described in the second part, "Gathering Forces."

The work of Robert Owen and the Utopians, Lord Shaftesbury and the housing legislation, the housing societies and their "model" housing, John Ruskin and Octavia Hill, and finally the achievements of enlightened employers at Essen, Port Sunlight and elsewhere are described. Her criticism of the great nineteenth-century housing reformers is lively and at times sharp. It is justly coloured by Miss Bauer's own political convictions, which—and she leaves no doubt of this, whether or not she converts her readers to her point of view—are derived directly from her study of housing. However smug some of the early reformers may have been in their desire to save the existing regime from the disaster of revolution, Miss Bauer shows their work in proper perspective with what came after. The changes in the social structure, with co-operative associations in housing, the growing demand for and consciousness of the value of sun, air, cleanliness and order, prepared the stage for the work of Barry Parker and Raymond Unwin, and for the realisation of housing as a complex problem within the larger physical and social framework of society as envisaged by Patrick Geddes.

Parts III and IV, occupying approximately two-thirds of the book, give detailed analyses of modern

* MODERN HOUSING, *by Catherine Bauer. London : George Allen & Unwin. 1935. 20s.*

methods in housing from every point of view. The present situation, the means of financing schemes and ensuring quality, details of layout, plans, construction, architecture and economics are described from European examples. Statistics and plans are arranged for easy comparison, and Miss Bauer's critical facility gives point and reality to what would in any case be a valuable work of reference. The appendix to Part III describes the national housing measures of England, Germany, Holland, Belgium, France, Austria, the Scandinavian countries, and Switzerland. Particularly interesting are the analyses of German and Austrian housing finance.

Finally, there is a well-arranged collection of plates of past, present and projected housing development, and an excellent and comprehensive bibliography.

The main object of Miss Bauer's book is to find, in the housing accomplishment of a number of countries, a guide to the solution of America's particular problem. According to her figures, in England, Germany, Holland and several other countries with a combined population only slightly greater than that of the United States, at least four and a half million " modern " dwellings have been put up since the War, as compared with America's ten thousand. This she attributes largely to the lack of an organised and informed demand for better housing.

The subject is full of contentious matter, and we have to thank Miss Bauer that she deals adequately, but concisely, with such time-honoured arguments as " high buildings *v.* low," and " can architecture be truly functional." The all-important question of the politics of housing is a matter on which opinions will be sharply divided, and is one which naturally figures largely in a complete survey of the problem. Miss Bauer describes the changes in policy under the various administrations, and sees the existence of a downward trend in the technique and achievement of housing in many European countries. While advocating the " self-contained regional town, complete with assorted industries, and agricultural belt and full facilities for social life . . . of a size and extent limited in advance and treated scientifically with respect to national resources, manufactures and distribution," as the ideal, it appears to her quite impossible of achievement within the present class-property-profit-economic system, and probably even more impossible within a Fascist State.

Such, briefly, are Miss Bauer's views, and, ably advocated as they are in this book, they add interest to what is already something more than " a valuable book of reference."

FELIX GOLDSMITH [*A.*]

THE ÆSTHETICS OF BRIDGE DESIGN*

This is a paper which was awarded the first prize of a gold medal and one hundred guineas by the Council of the Public Works, Roads and Transport Congress and was read at the meeting held in London in November last.

It is but a pamphlet of some 50 pages, but its significance is undoubted.

The literature on the subject is meagre and until this pamphlet appeared nothing much seems to have been produced by the engineers on the subject since Mr. Joseph Husband read his paper at the Institute of Civil Engineers upon " The Æsthetic Treatment of Bridge Structures," a paper remarkable for its modern outlook seeing that it was written 35 years ago.

After Mr. Husband's paper we had to wait until 1933, when Messrs. Chettoe & Adams published a book on reinforced concrete bridges, which contains a short chapter on the æsthetics of bridge design and a pertinent sentence in the preface which runs as follows :—" Both as an art and a science bridge building is once more coming into its own ; it flourished as an art, became a science, and the art was in danger of being forgotten, except by the great bridge builders in whom science and art were reconciled."

The great bridge builders referred to were doubtless Telford, Brunel, Rennie and Stevenson, who realised, perhaps subconsciously, that there was not only a science but a humanist art of bridge building, possibly because they had been born before the great civilised tradition of building had become debased.

But no criticism of moment seems to have occurred for more than a generation until Mr. Macdonald has reminded us again that there is not only an æsthetic of bridge design but a philosophy of that æsthetic.

He is certainly to be congratulated upon a very lucid and orderly contribution, all packed into a very small space.

Perhaps no better picture can be given of his approach than to enumerate the various sections into which he divides the subject :—The aim of æsthetic design ; expression of function ; fitness for purpose and economy ; beauty and truth ; grammar of design ; unity ; definition ; inflexion ; colour ; texture ; line ; mass ; ornament ; bridges and their surroundings ; etc.

Much of the æsthetic shop window is here displayed at a glance, into which it would be well if some of our modernists would peep, when they would see that functionalism has been given its proper and stable position as an indispensable background instead of regarding it as some sort of mechanical toy nodding its head with importance in the front of the shop window.

Mr. Macdonald refuses to have anything to do with the romantic confusion about truth and beauty. " Appreciation of the beautiful is by sensibility : appreciation of the truthful is by ratiocination. Beauty and truth, therefore, as they satisfy in different respects, are not synonymous, and the declaration that

> " Beauty is truth, truth beauty—that is all
> Ye know on earth, and all ye need to know "

is misleading ; interesting enough, however, it shows that what is not truthful may be enshrined in a beautiful expression." To speak thus creates a blast of fresh air in the temple with a vengeance, but it has got to be done, and by whom more appropriately than by an engineer, provided that he sees to it that the foundations of the temple are sounder after his passage. Again :

* A PHILOSOPHY OF ÆSTHETIC BRIDGE DESIGN. *by Ian G. Macdonald, B.Sc., Assoc.M.Inst.C.E.*

> "the suppression of structural truth is no heinous offence in itself; that insistence on the whole truth in season and out of season is a breach of good manners; that, in fact, truth should be released from the 'structural' strait-jacket in which it is almost invariably confined when the appearance of a bridge is in question and that the truth which matters is truth as the layman, not the analyst or the dissector, sees it; those bridges only are 'untrue' which *appear unfit* for their purpose to an extent which distresses; that and that alone is the unpardonable truth."

There seem to be echoes of Geoffrey Scott and Trystan Edwards here, but no matter, it is all to the good.

There is one point, however, not dealt with which cannot be overlooked by any philosophy of the æsthetics of building if it is to be coherent, a point of special importance in relation not only to structural engineering but to all other allied forms of specialised activity based upon physical science to the exclusion of other values; this point has been summed up admirably by Professor J. S. Haldane recently as follows:—"Although physical science rests ultimately on sense-experience, yet in so far as physical science does not take account of more than a limited portion of what is involved in sense-experience it is an abstract science. By its abstractness it can extend immensely the scope of its application, but the application deals only with a limited and artificial aspect of experience."

This article is already too long. I therefore leave the implications of that sound statement for the consideration of any who may be interested; but in any case architects should read this pamplet for themselves, they will then welcome the excursion of an engineer into æthetics; it has come none too soon.

W. E. Vernon Crompton [*F.*]

"THE COLOSSUS OF ROADS"

The Story of Telford, *by Sir Alexander Gibb. London: Alexander Maclehose. 1935. 16s.*

To many this Life of Telford has come as something long wished for. "Self Help," by Smiles, until now has been the only record of a man whose name nevertheless has been a household word for thousands. To the writer, as one of these many, his name has vaguely meant something to reverence; in my case chiefly connected with the Menai Straits Bridge, in others doubtless stretches of road, canals, viaducts or buildings, but in all cases a name to conjure with.

There can be no doubt that Smiles created and fostered this aura in his time around the heads of all those whom he chose as examples of integrity. And nowadays, when his volumes are looked upon as prim and unreadable, it is good that we have this detailed and comprehensive history of his life's work before us—or should we be more exact if we say that the two together are comprehensive? For there is something in Smiles that is missing in the work under review, just as in Smiles there is nothing of the intense interest that Sir Alexander Gibb gives to us. The latter gives us detail and incident of all his multifarious works, whilst the former, though possibly inaccurate and sketchy, shows an appreciation of the man's outstanding greatness that washes away all small defects and leaves us amazed and humble.

For here we have a self-made man, of lowly origin, who throughout his life had but one idea and goal, that of the job of work before him, distinct from his own gain—great or small, one cannot imagine his treating whatever he undertook without the determination to produce the best result in his power. Whatever the problem might be entrusted to him as an engineer, he approached it and dealt with it throughout from the widest point of view, weighing and balancing all points and reasons leading up to the demand for bridge, dock or canal, its political and economic effect, and finally having made up his mind never ceased to fight, many times against fearful odds, to bring it to a successful conclusion.

In writing to Little he says: "Knowledge is my most ardent pursuit, a thousand things occur that would pass unnoticed by good easy people who are contented with trudging on in the beaten path, but I am not contented unless I can reason on every particular." Again: "Why, by that plain simplicity and natural ease which ought to be the study of all men; the moment that is departed from, there is something takes its place which is disgusting."

"This is a noble object, the field is wide, and new ground capable of improvement beyond even the reach of common apprehensions—to take up and manage the water of a fine island, is likely a fairy tale, and if properly conducted may prove the means of rendering it a Jewell among the Nations, but of this more bye and bye, we have now Water enough, rain every day."

"I am very desirous that the thing should be fully and fairly explained, so that the public may be made aware of its extensive utility. If I can accomplish this, I shall have done my duty; and if the project is not executed now, some future period will see it done, and I shall have the satisfaction of having followed you in promoting its success."

"Nothing which I have before had an opportunity of examining can equal the benefits which are likely to arise from exchanging by a direct and regular conveyance the coal and lime which abound in the western, for the supplies of grain produced in the eastern districts, which districts taken together occupy a tract of upward of 120 miles in length and from 10 to 20 in breadth—I mention not the inferior objects of manufacture (which are far from being inconsiderable), because agriculture is deservedly the leading feature."

These, a few quotations taken at random from throughout the work, all give a clear and delightful picture of the man's mind and outlook upon life, and further bring home very clearly that to be really great in any profession means much more than even a super knowledge of its technicalities.

His devotion to his work is brought out again when one considers the difficulties of travel at this period, the list of food and wines that he collected for his voyage across the North Sea testifies to this—the descriptions of his various tours through England and Scotland, in spite of which we read that in his last 33 years he built in Scotland over 1,000 bridges, large and small, 1,200 miles of road, and harbour works at 43 places; his canal work alone was of such size and importance, of so varied a nature and so widely spread as to afford a sufficient occupation for a busy man.

In addition after 1824 there was the planning and building of a large number of churches and manses, and it is to be remembered that apart from this Government work, Telford was at one time or another connected with almost all the harbours in Scotland. It is, perhaps, not surprising that from 1801 to 1831 he seems not to have missed making at least one tour in Scotland each year.

Even admitting that he was a super-man, one is left wondering how it was possible that he should have accomplished what he did. The list of his works surely must equal, if not exceed that of any engineer up to the present time, and yet carried out under well-nigh unbelievable difficulties of transport or postal communication.

Is the answer to this that what we gain in time by modern means of transport, telephone and wireless, we lose in the time given to such as Telford for the quiet contemplation of problems that he and his contemporaries enjoyed whilst journeying slowly from place to place.

Reading this account of his life and work one realises that Telford stands as an example of all that is finest as a monument of professional rectitude.

MAXWELL AYRTON [*A.*]

FACTORY ARCHITECTURE

INDUSTRIAL ARCHITECTURE, *edited by C. G. Holme. Introduction by L. H. Bucknell, F.R.I.B.A. London: The Studio, Ltd. 30s.*

It is only in recent years that the average Englishman has taken an interest in industrial architecture. Before the War the general view amongst laymen was that industrial buildings did not, and could not, by their very nature, come under the heading of Architecture. The development of machinery and the demand for large and complex buildings have brought factory work within the scope of the architectural profession, with the result that buildings are not only better planned, but better looking and increasingly efficient.

The Studio, Ltd., have now produced a book of plates showing a selection of the best examples of the industrial architecture of to-day. The book is intended to be of assistance to designers, builders and industrialists. It consists chiefly of photographs of industrial buildings in all parts of the world, with an introduction of some twelve pages by Mr. L. H. Bucknell, F.R.I.B.A., which forms the text of the book.

The photographs generally are excellent; many are stimulating and would be useful to designers and they give a very fair idea of the present trend of design in industrial architecture. Attached to the photographs are brief explanatory notes which are in most cases of a general rather than a technical nature, and are not likely to be of great assistance to the architect; they would probably have been more useful if the dimensions and costs of foreign buildings had been given in feet and pounds, for purposes of comparison.

From the designer's point of view, the chief fault of the book is the absence of plans in nearly all cases. To the layman the dramatic qualities of the elevation may seem to be of greater interest than the plan, but to the student of architecture the extent to which the designer has been successful in producing a smooth working and efficient plan is of the utmost importance. Without plans, it is impossible for the technical reader to see how the elevation of the building relates to the processes of manufacture within; he is unable to study the "flow"—the one point in factory planning in which the architect or engineer is likely to be most interested, and in this respect the value of the book is limited.

Mr. Bucknell's introduction mentions briefly the principal considerations which concern the designer of industrial buildings, including such important questions as planning and construction as it will affect alterations and extensions, choice of suitable materials, lighting, ventilation and other mechanical services. The questions of fatigue and fire protection are also mentioned. It is a pity that the introduction does not describe or compare the merits and costs of the different forms of construction and the various materials now in use. This would have added greatly to the value of the book, not only to the architect, but also to the industrialist who is naturally greatly concerned with costs.

Mr. Bucknell points out that the architect should thoroughly understand the essential processes of manufacture if he is to produce an easy-flowing plan. Coming to the problem with an open mind and a grasp of the fundamental requirements, the architect should not be limited in his planning to what is the usual practice, but should often be able to suggest alterations and improvements which will tend to reduce labour, save time and money and accelerate the flow from the raw material to the finished product.

Although the book is probably of limited value to the architect owing to the absence of plans and the scanty information about costs and construction, it may be of interest to the business man, and should, at any rate, assist materially in dispelling the idea that all industrial buildings are bound to be ugly.

C. A. MINOPRIO [*A.*]

COMMUNITY CENTRES

BOARD OF EDUCATION: JUVENILE ORGANISATIONS COMMITTEE. REPORT ON THE NEED FOR YOUTH COMMUNITY CENTRES ON NEW HOUSING ESTATES. *H.M.S.O. 1935. 3d.*

NEW HOUSING ESTATES AND THEIR SOCIAL PROBLEMS. *Issued by the New Estates Community Committee of the National Council of Social Service. 1935. 6d.*

These two Reports, written on parallel and obviously concerted lines, are welcome and timely in that they call attention to a problem of fairly recent origin, but of great and urgent importance. Since the War local authorities have built upwards of a million State-aided dwellings, largely in the form of cottages in entirely new garden cities on the borders of the old industrial cities. The bare task of providing the houses and essential services has been so huge that cultural and social life has been left to develop as best it may. Local authorities have built schools; strenuous efforts by the various religious bodies have gone some way to meet the need for churches; but apart from this the inhabitants have been left to their own devices. Yet on these new estates the development of the "good life" is hampered by all sorts of conditions which have no counterpart in the old village, the country town or the middle-class suburb. An entirely fresh beginning must be made. The population has been simply torn up by the roots and replanted elsewhere. There are no existing associations which can be expanded to meet new needs. The inhabitants form an undifferentiated society with a common low level of income and with no leaven of leisured and cultured people to supply stimulus and leadership. There are no halls, club buildings or even large drawing rooms to accommodate dances, musical societies or discussion circles, much less indoor games or physical training. If, in spite of these disabilities, social institutions are gradually springing up on housing estates, it shows how insistent is the pressure of common needs and ideals, and how important it is that these spontaneous movements should not be stifled through lack of proper facilities.

The purpose of these Reports is to suggest the manner in which such facilities can best be provided. Under the Housing Act, 1925, local authorities are empowered "if desired jointly with any other person" to provide "buildings or land which in the opinion of the Minister (of Health) will serve a beneficial purpose in connection with the requirements of the persons for whom the housing accommodation is provided." Both Committees are satisfied that suitable buildings can be provided on an adequate scale only on the condition that local authorities will in future exercise this power. They further suggest—as the best practicable, if not the ideal solution—that the buildings should take the form of Community Centres. Here the two Reports part company, the J.O.C. Report concentrating on the provision for young persons, while the New Estates Committee considers buildings suitable for adults as well. Apart, however, from the plans illustrated (of which more anon), there are few hints on the planning of these Centres, beyond the statement (almost identical in both Reports) that premises the whole of which are used in common by adults and young persons have not proved satisfactory in practice, and that adults and juveniles should be effectively separated, *e.g.*, by the erection of two distinct wings in one building. The J.O.C. Report suggests that in juvenile centres the main rooms (Hall, Gymnasium, Recreation Rooms, Workshop, etc.) should be used in common by the various organisations, and that each organisation should have a room to itself.

It may be doubted whether the necessity for keeping apart the different organisations has been adequately stated. Except for definitely mixed activities, girls and boys need to be separated fully as effectively as juveniles from adults; while the mere fact that there are three types of organisation —clubs, brigades and scouts—each catering for the growing boy implies differences of outlook and method which in close contact might lead to friction. Again, the houses on the new estates are much less dense than in the towns, and a single Community Centre would mean a considerable walk from outlying parts of the estate; the serious loss of efficiency due to distance is a difficulty which can only be grasped from practical experience. There are, moreover, complex problems involved in the management and financing of a joint building, into which we cannot enter. The ideal solution is undoubtedly a central building containing an Institute for adults, a Public Library and a common Hall for entertainments to serve the needs of all organisations; and, radiating from it, separate buildings—semi-permanent, if necessary—for each juvenile organisation on suitable sites throughout the estate. This may even prove the most economical solution in the long run, as in the confusion generated by joint use of a common building the strongest organisation will probably tend to become a cuckoo in the nest, and the others, left homeless, will eventually require further buildings.

The plans attached to the Reports illustrate the dangers of the "model" plan, for neither plan really faces the difficulties. The J.O.C. plan for a Youth Centre depends on one entrance and on one central top-lit corridor for its whole circulation—an arrangement which must lead to pandemonium. The estimated cost is £8,000 to £10,000, a sum which would suffice to build four or five fine buildings, such as have been provided in recent years for boys' clubs in South Wales. The plan in the New Estates Committee's Report shows an altogether better arrangement, but the one principle stressed in the Report is ignored—there is no separate accommodation for juveniles.

The J.O.C. Report is strongly commended to the attention of local authorities by the Ministers of Health and Education, and action on some such lines is undoubtedly an urgent necessity. The problem is not confined to municipal cottage estates, but is equally pressing in many privately developed areas. There is also an analogous problem in estates of block-dwellings.

It is to be hoped, however, that local authorities who decide to act will not adopt either of the plans in these two Reports in an unquestioning spirit. Each particular case demands and is worthy of special consideration.

There is a great contrast between the printing and get-up of the two Reports, which does not redound to the credit of H.M. Stationery Office. It is not merely a question of cost. We know that the Stationery Office can turn out good printing. The question is, why don't they?

A. Llewelyn Smith [*A.*]

ABBEYS.

The English Abbey: Its Life and Work in the Middle Ages, *by F. H. Crossley. London: Batsford. 1935. 7s. 6d.*

This is one of a series of books, limited in size, but, as might be expected from the publishers, lavishly illustrated. To its 105 pages of text, 138 half-tone blocks provide a commentary, and there are line engravings as well. If we are not indulged with many plans—the most informative of all methods of illustration—we must at least admire the resourcefulness which to the two plans in the book adds two more by using them as end-papers.

The book is, as the author says, a compilation for the use of the general reader, giving the main outlines of the subject, and it would not be fair to expect more than that in so small a compass. The First Commissioner of Works contributes an agreeable preface, and there follows a list of the more important monastic remains, protected from criticism by the disarming monosyllable. The first chapter deals briefly with the orders, and if we could have wished for something on the origin of the monastic plan, the exigencies of space may answer for it. But the implication that the first crusade was even remotely a cause of the foundation of the Cluniac order, which preceded it by nearly 200 years, must not be allowed to pass. Chapter two gives an account of the officers and inmates of monastic houses, and chapter three of the buildings. In writing of the churches of monasteries, it is necessary to keep in mind the fact that the development of the church plan is not merely an outcome of monastic necessities. Lady chapels and the multiplication of altars, were symptomatic of religious thought and common to secular and monastic churches alike, and the scale and progress of building depended on the resources of the builders. That side of the church which adjoined the claustral buildings would naturally be taken in hand first, but otherwise, except for special reasons with the Cistercians, the architectural details were not influenced by the order to which any monastery might belong. The absence of a proportionate nave at Kelso (p. 40) has been wrongly inferred from what remains of the church; what is sometimes taken for a nave is really a western adjunct to west transepts. The western transepts of Bury St. Edmunds and Ely (p. 41) are not twelfth-century developments, but represent a pre-Conquest tradition. In the account of the

claustral buildings the reference to the Cistercian refectory needs modification. It was not built at right-angles to the cloister so that it could be enlarged as required, but so that the monastic kitchen could be planned in the same range, leaving the whole of the western range to the conversi. In the earliest Cistercian plans the refectory stands east and west, like those of other orders. At Canterbury the lavatory connected with the refectory no longer remains (p. 49). There is no reason to suppose that Wykeham's treatment of the nave of Winchester (p. 66) was due to lack of funds. The church of Bath Abbey is not contained within the dimensions of the quire of the original church, but occupied the site of its nave. In the chapter on building, the account (p. 87) of the transport of stone to Rievaulx Abbey is based on the theory of canals cut for the purpose, but these are nothing but the old course of the Rye, which, as the documents show, was given a new course on the west side of the dale in the twelfth and thirteenth centuries. The illustrations, admirable in themselves, are not always accurate in their underlines—the crypt of Lastingham is of the eleventh century, not the twelfth, and the transepts of Rievaulx belong to the twelfth century church, as far as their west walls are concerned. The use of Gilbertian for Gilbertine, in reference to Watton, is unfortunate : the views of Buildwas and Whitby are out of date, and the drawing of the tile pavement in Byland appears to be upside down.

It must be regretted that in a book which shows such evident signs of careful reading and conscientious work, and contains so much collected information, there should occur blemishes such as these and others, all of which a more thorough acquaintance with the literature of the subject might have avoided. In spite of them, the book has its obvious merits, and should provide readers with no previous knowledge of the subject with much useful material in a handy form.

C. P.

HAMPTON COURT

HAMPTON COURT, *by Edward Yates, F.S.A. Historic Buildings Series, Duckworth, London. 1934. 3s. 6d.*

This palace of the English kings is of peculiar interest as illustrating on a large scale not only the full flower of English mediæval work but also the developed Renaissance of Wren.

As Mr. Yates informs us, Wolsey's building was the most important of its time ; the last to be surrounded by a moat and the largest brick building since Roman times. Owing to its occupation by the Cardinal, and afterwards by all the succeeding Tudor sovereigns, we have unsurpassed opportunities in the records of the time for reconstructing the social background of its oft-times tragic history. Fortunately the Georges did not feel at home within its walls, so that, apart from the damage wrought by Henry VIII to Wolsey's work and by Wren to that of both of his predecessors, we have not the usual tale of later " improvements " or restorations.

Little of importance has previously been written on the palace, other than Mr. Ernest Law's *History of Hampton Court*, but in this eminently readable and yet scholarly book Mr. Yates gives us the benefit of many years of study. The author's modesty and easy style might lead a casual reader to think that this is merely one more of the many popular guides to famous buildings, but that would be a mistake, for no point of value is overlooked ; the intriguing references to recent re-discoveries are an illustration of this.

W. W. BEGLEY [*L.*]

WHO'S WHO

WHO'S WHO, 1936. *London : A. & C. Black. 1936. 60s.*

The 1936 edition of the indispensable reference book of everyone who's who from Aaron to Zwemer is as complete and likely to be as useful as its eighty-seven previous editions. The selection of names is thorough and on the whole reasonable, though most people can from time to time discover names which, so it seems to them, are conspicuous by their absence—if anything can be conspicuous in a directory of over three thousand seven hundred pages—and others which surprise them by their presence. Most people think Who's Who is a directory only of British persons, but this is not so, quite a number of notabilities from abroad are honoured, mostly authors and musicians whose works or performances are well known here. From our point of view it would be a valuable addition to have some foreign architectural biographies.

A minor use of Who's Who, but one by no means to be despised, is its use as a general and unpurposeful source of entertainment, the source book for unorthodox parlour games and an index not merely to facts but fancies or the strange fancies that may be provoked by facts. To whom of the leading members of the R.I.B.A., for instance, are the following recreations attached, " travel and boating," " gardening and collecting," " golf and tennis," " walking and climbing," " formerly hunting," " various," and which distinguished member has eight distinguished clubs. In a volume of so much importance and so much humour the most humorous thing perhaps is on the cover—the motto *Honi soit qui mal y pense*.

PRE-CONQUEST NORTHUMBRIAN CHURCHES

SOME EARLY MASONRY IN NORTH NORTHUMBERLAND, *by H. L. Honeyman. Reprint from Archaeologia Aeliana, 4th series, vol. XII. Newcastle, 1935.*

Archæologists and historians in the North of England have cause to be grateful for Mr. Honeyman's exact and painstaking research into various aspects of Northumbrian architecture, much of which has been made for the great Northumberland County History. This paper gives the results of Mr. Honeyman's recent examination of the stonework of various churches so that definite opinions might be formed of the incidence of pre-Conquest work in the county.

The period has received only scant attention hitherto and Mr. Honeyman has had to go over the ground afresh and to accompany his study of the buildings by a careful study of the few remaining documentary evidences. His pamphlet is written with a rare charm of style and shows that its author is a person of wide interests and much understanding—all of which contributes directly to the quality of his research by providing an intelligible background to the purely archæological part of his study. After a preliminary discourse on the history of the period, twenty-five churches are examined in detail and in many cases illustrated by clear plans and good photographs, showing the extent of existing pre-Conquest work. He is able to suggest period divisions derived from the architectural character of the remains. At the end of the pamphlet is a short note on the types of pre-Conquest church plans.

Review of Periodicals

Attempt is made in this review to refer to the more important articles in all the journals received by the Library. None of the journals mentioned are in the Loan Library, but the Librarian will be pleased to give information about prices and where each journal can be obtained. Members can have photostat copies of particular articles made at their own cost on application to the Librarian.

SCHOOLS AND UNIVERSITIES

ARCHITECTS' JOURNAL. *Vol. LXXXIII. No. 2139. 16 January.*

London University. The progress of Mr. Holden's buildings described.

INGEGNERE (ROME). *Vol. XIV. No. 1.*

Rome University City. General plan, illustrations and plans of the principal buildings.

ARCHITECTS' JOURNAL. *Vol. LXXXIII. No. 2140. 23 January. P. 156.*

ARCHITECT AND BUILDING NEWS. *Vol. CXLV. No. 3501. 24 January. P. 131.*

BUILDER. *Vol. CL. No. 4851. 24 January. P. 194.*

Penrhos College, Colwyn Bay, Sanatorium, by S. C. Foulkes [*A.*]. Twenty-six bed sanatorium for girls' school with 300 pupils.

BUILDER. *Vol. CL. No. 4851. 24 January. P. 187.*

Talbot Heath School, Bournemouth, by J. Hubert Worthington [*F.*]. A large girls' public school with accommodation for 500. Assembly hall seats 650; also gymnasium, science laboratories, dining hall, library, 18 classrooms and boarding houses.

CONSTRUCTION MODERNE. *Vol. LI. No. 15. 12 January. P. 317.*

Groupe scholaire and sports park Courbevoie (Seine), by F. Nanquette. Courbevoie is a Paris suburb of rapid growth, 55,000 increase in recent years. This block includes the schools for all types and ages and classes of work including physical training, art and technical training. The sports park includes a large open-air stadium and arenas for tennis, basket ball, etc., etc., and all the necessary services and offices.

BOUWKUNDIG WEEKBLAD ARCHITETTURA. *1936. No. 1. 4 January. P. 2.*

Seminary, Apeldoorn. A big seminary, with chapel, students' quarters and library and all usual offices.

LABORATORIES

ARCHITECTURE (PARIS). *Vol. XLIX. No. 1. 15 January. P. 9.*

Building research laboratories of the Department of Building and Public Works, Paris. This building corresponds to the British Building Research Station.

MUSEUMS AND EXHIBITIONS

ARCHITECT AND BUILDING NEWS. *Vol. CXLV. No. 3500. 17 January.*

The Naval Museum, Stockholm, by Ragnar Östberg: "a work of great distinction and personal character."

BYGGE KUNST (OSLO). *Vol. XVII. No. 12. P. 264.*

Small art gallery, Bergen, by Ole Landmark. A series of six rectangular top-side and top lit rooms for temporary exhibitions.

Article on modern museum practice by J. Lindstrom, illustrated by Vestlandske Industrial Art Museum. Almost all exhibits in built-in wall cases.

ARCHITETTURA (ROME). *Vol. XIV. December. P. 692.*

The third Naval Exhibition, Trieste, and the Universal Exhibition at the Padua Fair. Both good examples of display.

PROFIL (VIENNA). *Vol. IV. No. 1. January. P. 24.*

Illustrations and short descriptions of various exhibitions.

ZOOS

ARCHITECTURE (N.Y.). *Vol. LXXIII. No. 1. January. P. 11.*

Brooklyn Zoo. A complete small zoo layout, useful details and photos of enclosures. Includes zoological museum.

LIBRARIES

MONATSHEFTE F. BAUKUNST U. STADTEBAU. *Vol. XX. No. 2. February. P. 76.*

BAUGILDE. *Vol. XVIII. No. 4. 5 February. P. 87.*

Frankfurt University Library. Full plans and illustrations of model, etc., of competition schemes. An important reference.

ARCHITECTURE (N.Y.). *Vol. LXXIII. No. 1. January. P. 9.*

Cornwall Public Library, New York, by E. A. Matthiessen. Typical small U.S.A. library; single librarian control. Includes children's room and children's study. Lecture room in basement.

K.M.B.A.-BOUWKUNST STEDENBOUW. *Vol. VI. No. 12. December.*

Albertine Library, Brussels, and other large libraries.

RADIO BUILDINGS

PENCIL POINTS. *Vol. XVII. No. 1. January. P. 17.*

W.G.N. Broadcasting Station to be built as annex to Tribune Tower, Chicago; detail plans.

CIVIC BUILDINGS

SOUTH AFRICAN ARCHITECTURAL RECORD. *Vol. XX. No. 11. November. P. 327.*

Johannesburg Post Office, by F. D. Strong, architect to the Post Department.

SWIMMING BATHS AND SPORTS BUILDINGS

ARCHITECTS' JOURNAL. *Vol. LXXXIII. No. 2140. 23 January. P. 152.*

Winning competition designs for Coatbridge Public Baths and Health Offices, by James Davidson & Son [*L.*].

ARCHITECT AND BUILDING NEWS. *Vol. CXLV. No. 3501. 24 January. P. 124.*

Hampstead Squash and Rugby Fives Club, by W. S. Grice and Denis Poulton [*F.* and *A.*]. Contains two standard squash

and two fives courts with changing rooms for both sexes, spectators' galleries, lounge and bar and offices, etc.

MONATSHEFTE F. BAUKUNST U. STADTEBAU. *Vol. XX. No. 2. P. 73.*

Olympic Games, 1936. The stadium and accompanying buildings.

ARCHITEKTURA I BUDOWNICTWO (WARSAW). *Vol. XI. No. 9. P. 30.*

Recreation park with open-air swimming at Wisla. This Polish journal is now received regularly by the Library.

CONSTRUCTION MODERNE. *Vol. LI. No. 18. 2 February.*

Porte de St. Cloud Stadium, Paris. Football ground, stands, club house, tennis courts, etc.

MARKETS AND SHOPS

CONSTRUCTION MODERNE (PARIS). *Vol. LI. No. 16. 19 January. P. 341.*

ARCHITECT AND BUILDING NEWS. *Vol. CXLV. No. 3500. 10 January. P. 45.*

Covered market, Vevey, Switzerland, by Taverney, Schobinger and Getaz. Built to serve as market and general hall for fairs, sports and meetings. Has services and car park.

ARKITEKTEN (HELSINGFORS). *1935. No. 11. P. 166.*

Chemist's shop at Lauritsala combined with dwelling house.

BOUWKUNDIG WEEKBLAD ARCHITECTURA. *1936. No. 5. P. 53.*

Shop window glazing and lighting to avoid reflections.

TRANSPORT BUILDINGS

CONSTRUCTION MODERNE. *Vol. LI. No. 18. 2 February.*

Le Bourget Aerodrome terminal building, competition designs. First prize to M. G. Labro.

INDUSTRIAL

ARCHITECTURE ILLUSTRATED. *January 1936. P. 10.*

Creamery or dairy factory for the Co-operative Wholesale Society near Cricklade, by L. G. Ekins [*F.*].

ARCHITECT AND BUILDING NEWS. *Vol. CXLV. No. 3502. 31 January. P. 155.*

Factories : a review of some recent English factories.

BAUMEISTER (BERLIN). *Vol. XXXIV. No. 2. February. P. 21.*

Bakery—design of small country bakehouse.

OFFICES

ARCHITECT AND BUILDING NEWS. *Vol. CXLV. No. 3500. 10-17 January.*

Princes House, North Street, Brighton, by H. S. Goodhart-Rendel [*F.*] and W. F. Andrews [*L.*]. Includes bank, general offices for letting and shops with flats on the upper floors.

ARCHITECT AND BUILDING NEWS. *Vol. CXLV. No. 3500. 10 January. P. 58.*

Accounts Office, London and Home Counties Joint Electricity Authority, Surbiton, by G. G. Wornum [*F.*].

ARCHITECT AND BUILDING NEWS. *Vol. CXLV. No. 3500. 10 January. P. 73.*

Liverpool Savings Bank, Birkenhead, by Willink & Dod [*F.*].

BOUWKUNDIG WEEKBLAD ARCHITECTURA. *1936. No. 6. 8 February. P. 61.*

Dudok's latest building. The Hav-bank building, Schiedam.

HOSPITALS, ETC.

MODERNE BAUFORMEN. *Vol. XXXV. No. 1. January. P. 5.*

Surgical Clinic, Tübingen University. A large and important modern German hospital deserving close study. Excellently illustrated and described. Hospital in three parts : Wards ; treatment buildings ; nurses', doctors' and staff buildings. The ward section 5-storied in 9 divisions, all alike, with 33 beds each. Western half for men, eastern for women.

BAUGILDE (BERLIN). *Vol. XVIII. No. 2. 15 January. P. 33.*

New maternity ward in the Rittberg Hospital, Berlin-Lichterfelde, by F. Bömer and G. Petrich ; includes operating department.

ARCHITECTS' JOURNAL. *Vol. LXXXIII. No. 2139. 16 January. P. 90.*

Devizes Hospital, new wing and nurses' home, by W. G. Newton [*F.*] and partners.

Also Surbiton Hospital, by Wallace Marchment.

ARCHITECTURE (PARIS). *Vol. XLIX. No. 1. 15 January. P. 1.*

Surgical clinic, Paris, by M. Patouillard-Demoraine.

WELFARE BUILDINGS, CRECHES, ETC.

ARCHITECTURE (PARIS). *Vol. XLIX. No. 1. 15 January. P. 33.*

Large civic crèche near Berne. A charming modern building, by Salvisberg and Brechbuhl.

BUILDER. *Vol. CL. No. 4852. 31 January. P. 242.*

Infant welfare centre and school clinic, Margate, by W. R. H. Gardner [*L.*].

THEATRES AND CINEMAS, ETC.

ARCHITETTURA (ROME). *Vol. XIV. December. P. 671.*

Competition designs for the Rome Auditorium. A large public assembly hall to seat 5,000 and concert hall for 1,000. Several interesting designs, illustrated by plans and models.

BAUGILDE (BERLIN). *Vol. XVIII. No. 2. 15 January. P. 37.*

Open-air assembly theatres for Nazis. Simple arenas, making good use of natural conformations of land.

CONSTRUCTION MODERNE (PARIS). *Vol. LI. No. 17. 26 January. P. 350.*

Maison Paroissiale, Neuilly-sur-Seine, by L. and J. Decaux : an assembly hall and theatre with seats for 600.

Also Cinema Balzac, Paris, by M. Gridaine—636 seats.

ARKITEKT (ISTANBUL). *Vol. V. Nos. 11-12. P. 343.*

Bielefeld, Germany. Concert hall, by M. H. Tietmann.

BYGGMÄSTAREN (STOCKHOLM). *1936. No. 3. P. 32.*

Cinema, Stockholm, seating about 700, by Nils Karlsson.

CHURCHES

ARCHITECTS' JOURNAL. *Vol. LXXXIII. No. 2139. 10 January. P. 104.*

St. Gabriel's Church, Prestwich, by Taylor and Young [*F.* and *A.*].

ARCHITECT AND BUILDING NEWS. *Vol. CXLV. No. 3508. 7 February. P. 184.*

St. Christopher's Church, Withington, Manchester, by B. A. Miller [*F.*].

MONATSHEFTE F. BAUKUNST U. STADTEBAU. *Vol. XX. No. 1. P. 7.*

Country church, Niederbonsfeld, Westfalen, by K. Wach and H. Rosskotten.

ARKITEKTEN (HELSINGFORS). *1935. No. 12. P. 180.*
Mikael Agricola Church, Helsingfors, by Lars Sonck ; Hollola Church restored by Carolus Lindberg.

DOMESTIC AND HOUSING

JOURNAL OF INST. OF MUNICIPAL AND COUNTY ENGINEERS. *Vol. LXII. No. 15. 21 January. P. 781.*
The housing question. Paper by Sir Herbert Humphries [*L.*], based on his experience as City Surveyor of Birmingham. Useful analyses of costs of various house types.

L'ENTREPRISE FRANÇAISE. *Vol. L. No. 60. December. P. 6.*
Description and illustrations of the Maisons-Alfort (Seine) housing scheme by the office of the Department of the Seine, one of the most progressive French local authorities. The scheme covers a more or less square area of 23,500 sq. metres and consists of six-floor blocks.

ARCHITECTURAL REVIEW. *Vol. LXXIX. January. P. 5.*
"Highpoint," flats at Highgate, by Lubetkin and Tecton. One of the most interesting modern concrete flat schemes in England, illustrated and described in articles by Le Corbusier and J. M. Richards [*A.*].

ARCHITECTS' JOURNAL. *Vol. LXXXIII. No. 2140. 23 January. P. 167.*
Winchester Court flats, Vicarage Gate, Kensington, by D. F. Martin Smith [*A.*]. 1, 2 and 3-bedroomed flats : rents £120-£245.

ARCHITECTS' JOURNAL. *Vol. LXXXIII. No. 2139. 16 January. P. 95.*
Chesterfield House flats, S. Audley Street, W., by Burnett and Eprile [*FF.*]. 100 flats from 2 recep., 4 bed to 1 living and 1 bed-room. Rents £195-£700.

MONATSHEFTE F. BAUKUNST U. STADTEBAU. *Vol. XX. No. 1.*
Illustrations of a number of good modern German houses.

ARCHITECTURAL FORUM. *Vol. LXIV. No. 1. January. P. 1.*
"Small houses for civilised Americans." A lively analysis, in popular terms, of the influences at work in house design, planning, equipment, etc., excellently displayed in coloured diagrams.

BYGGMÄSTAREN. *1936. No. 1. P. 5.*
Illustrations and descriptions of several recent Swedish housing schemes in town and country.

HOTELS

ARKITEKTEN (COPENHAGEN). *Vol. XXXVII. No. 11-12. P. 165.*
Hotel buildings and restaurants. Article illustrates several good recent examples ; details of room and service design ; restaurant planning ; table plans, kitchens, etc. ; useful reference.

MATERIALS AND CONSTRUCTION

DESIGN AND CONSTRUCTION. *Vol. VI. No. 3. January. P. 97.*
Design and technique in different kinds of brick. First of series of articles by E. H. Lockton, dealing with several modern English types.

ARCHITECTURE (N.Y). *Vol. LXXIII. No. 1. January.*
W. F. Bartels's Better Practice series. Sheet metal equipment and its use.

JOURNAL OF INST. OF JAPANESE ARCHITECTS. *Vol. XLIX No. 605. P. 1281.*
Articles on the latest Formosa earthquake and on earthquake construction in Formosa and the Shijuoka district.

ARCHITECTURAL REVIEW. *Vol. LXXIX. No. 471. February. Timber.*
A large special number dealing cheerfully and intelligently with timber as a crop, a product, a natural material, a reconstructed material and technically with its properties, seasoning, decay, etc. A magnificent gesture, well illustrated and written.

ARCHITECTURE D'AUJOURD'HUI. *Vol. V. No. 12. December. Facing Materials.*
Marble, plywood, ceramic materials, brick, metal, cement and stucco, linos, carpets, etc., etc. A series of descriptive and instructive articles on the qualities and use of materials in all their aspects. A useful reference number.

EQUIPMENT

JOURNAL OF INSTITUTION OF CIVIL ENGINEERS. *1935-36. No. 3. January. P. 378.*
Industrial, agricultural and domestic heating with electricity as a by-product. Paper by S. B. Donkin on the possibilities of the economical development of district heating using the heat now produced but wasted in electricity generation. Contains lists of existing district heating systems in Europe and bibliography.

MUSEUMS JOURNAL. *Vol. XXXV. No. 10. January. P. 365.*
The lighting of the new wing of the National Portrait Gallery, by H. M. Hake, the director. Detailed description of equipment and principles followed.

PENCIL POINTS. *Vol. XVII. No. 1. January. P. 33.*
Door locks. A useful reference article fully illustrated. Everything to do with lock types, fixing, construction, keys, etc.

JOURNAL OF INSTITUTE OF HEATING AND VENTILATING ENGINEERS. *Vol. III. No. 35. P. 493.*
Hotel heating and ventilating installations ; paper by S. G. Saunders.

TOWN PLANNING

ARCHITECTURAL REVIEW. *Vol. LXXIX. January. P. 17.*
The Town. Second part of Thomas Sharp's article, entitled Hell, Utopia and Middlesbrough.

BYGGMÄSTAREN ALLMÄNNA UPPLAGEN. *1935. No. 39.*
Article on the work to be done in applying the Norrmalms development plan, Stockholm.

GENERAL

JOURNAL OF THE ROYAL SOCIETY OF ARTS. *Vol. LXXXIV. No. 4339. 17 January. P. 247.*
Post-war tendencies in German art schools, by Dr. Nikolaus Pevsner. A remarkably interesting paper dealing with present-day German art training and ideals, and the methods that preceded the Nazi regime's changes ; includes a generous tribute to the work of Walter Gropius and a statement of Nazi opinion about the Bauhaus.

MODERNE BAUFORMEN. *Vol. XXXV. No. 1. January. P. 1.*
Stuttgart. List and some illustrations of "the most important buildings in Stuttgart, which a foreign architect ought to see."

ARCHITEKTURA I BUDOWNICTWO (WARSAW). *Vol. XI. No. 6-7-8.*
Polish architecture. 110 illustrations of recent Polish buildings with translation in English of preface and captions.

Accessions to the Library

1935-1936—IV

Lists of all books, pamphlets, drawings and photographs presented to, or purchased by, the Library are published periodically. It is suggested that members who wish to be in close touch with the development of the Library should make a point of retaining these lists for reference.

Any notes which appear in the lists are published without prejudice to a further and more detailed criticism.

Books presented by publisher or author marked R.
Books purchased marked P.
**Books of which one copy at least is in the Loan Library.*

ARCHITECTURE

Societies (General)

ARCHITECTURAL ASSOCIATION
Diary and Year Book, 1936. R.
(The Technical Reference formerly incorporated with the Diary will in future be issued separately in alternate years. The next issue will be June, 1936.)

ROYAL INCORPORATION OF ARCHITECTS IN SCOTLAND
Kalendar. 1935-36. [1935.] R.

HAMPSHIRE AND ISLE OF WIGHT ARCHITECTURAL ASSOCIATOIN
Diary and Year Book. 1936. 1936. R.

History

YERBURY (F. R.)
One hundred photographs. By F. R. Y——.
11¾″×9″. (5) p.+100 pls. Lond. : Jordan-Gaskell. [1935.] R.

CARRIAZO (J. DE M.)
Arquitectura prehistorica. (Cartillas de arquitectura española *series*, i.)
7″. 16 pp.+xxiv pls. (backed). Madrid. 1929. *Presented.*

BELLIDO (A. GARCIA)
Arquitectura romana. (Cartillas de arquitectura española *series*, ii.)
7″. 26 pp. + 30 pls. (backed). Madrid. 1929. *Presented.*

CAMPS Y CAZORLA (E.)
Arquitectura Califal y Mozárabe. (Cartillas de arquitectura española *series*, iv.)
7″. 32 pp. + xxx pls. (backed). Madrid. 1929. *Presented.*
Arquitectura cristiana primitiva, Visigoda y Asturiana. (Cartillas de arquitectura española *series*, iii.)
7″. 20pp. + xxviii pls. (backed). Madrid. 1929. *Presented.*

AGNELLO (GIUSEPPE)
L'Architettura Sveva in Sicilia. Con disegni di R. Carta e G. di Grazia. (Collezione meridionale, serie iii : Il mezzogiorno artistico.) *With* Bibliografia [of author] *and* Errata *inserted.*
11½″. 493 pp. Roma : Collezione Meridionale. 1935.
Presented by Prof. Guido di Stefano.

STEFANO (GUIDO DI)
L'Architettura gotico-sveva in Sicilia.
9¾″ × 7″. 93 pp. incl. pls. Palermo : F. Ciuni. 1935.
Presented by Prof. Stefano, the author.

WREN SOCIETY
* Twelfth volume . . . 1935. Miscellaneous designs and drawings by Sir Chr. Wren and others, including James Gibbs and Nicholas Hawksmoor, for houses, public buildings and decorations, with the plans for the rebuilding of the City of London after the Fire.
12¼″ × 10″. Oxford : U.P. 1935. £1 1s. P (2, by subscription).

FORMIGÉ (JEAN)
Notice sur la vie et les travaux de M. Jean-Louis Pascal. (Institut de France : Académie des Beaux-Arts.)
Specially bound copy. 11.″ 14 pp. + front. Paris. 1921.

BURNET (*Sir* JOHN J.)
Jean Louis Pascal. . . . An old pupil's appreciation. (*From* R.I.B.A. JOURNAL—xxvii.)
11″. Lond. : Central School of Arts and Crafts. 1923.
Bound after Formigé (Jean), Notice, 1921.
—Both presented by Sir John Burnet [F.].

BREUHAUS DE GROOT (F. A.)
Bauten und räume. *Etc.*
10½″ × 8½″. xii pp. + 155 pls. Berlin : Wasmuth. [1935.] (£1.) P.

HAVLICEK (JOSEF) *and* HONZIK (KAREL)
Stavby a plány. [Buildings and plans.] (Mezinárodni soudobá architektura (Internationale architektur der gegenwart) *series*, 3.)
9½″. 148 pp., incl. pls. Praha [Prague] : Odeon. 1931.

MASTERS OF ARCHITECTURE (MEISTER DER BAUKUNST) *series.*
Geneva
Jirí Kroha. *Introd. by* J—B. Svrcek. (*Text in Czech and German.*)
Josef Gocár. *Introd. by* Z—Wirth. (*Text in German and French.*)
—each 8″ × 6½″. Geneva : Meister der Baukunst. 1930.

ROSSMANN (ZDENEK), *editor*
Architekt Bohuslav Fuchs. 1919-1929. Prehled . . . (Résumé de sa création architectonique) *etc.* (*Text in Czech, German and French.*)
10¼″. 74 + pp. incl. pls. Bâle : Service des Pays. 1930.

WIRTH (ZDENEK), *text.*
Josef Gocár Praha. Hradec Králové. [Town of Hradec Králové. Josef Gocár, architect.]
12″ × 9¼″. 15 pp. + 32 pls. Wien-Berlin : Aida : Prague : Topic. [193—.]
—All presented by Dr. Josef Gocár [Hon. Corr. Mem.].

Professional Practice

BUILDERS' SOCIETY
Acts regulating buildings, etc., in the Metropolis.
8o. Lond. 1856.
Presented by Mr. H. A. Pelly [F.].

SAFFORD (ARCHIBALD)
The Rent and Mortgage Interest Restrictions Acts, 1920 to 1935.
8th ed. of The Rent and Mortgage . . . Acts. 8½″. xxxii+275 pp. Lond. : Sweet & Maxwell. 1936. 8s. R.

MANCHESTER : MANCHESTER ARCHITECTS' AND BUILDERS' CONSULTATIVE BOARD
*Specification of stone. Report No. 6.
Revised ed. pam. 8¾″ × 6¾″. Manchester. 1935. 1s. R.

CHARTERED SURVEYORS' INSTITUTION *and others*
Standard method of measurement of building works.
3rd ed. 12¼″. 81 leaves. Lond. 1935.
Specially bound library copy, with presentation page.
Presented by the Joint Committee.

(Societies)

INSTITUTE OF CHARTERED ACCOUNTANTS
List of members, 1936. Royal charter and bye-laws.
1936. R.

Building Types
(Civil)

VETH (CORNELIS)
Het Raadhuis te Waalwijk. (*From* Het Bouwbedrijf, *journal*. 16 June.)
12½″. The Hague. 1933. R.

GOLDSMITHS, *Worshipful Company of*
The Worshipful Company, *etc.* [Handbook of information.]
pam. 5½″. 1 pl. Lond. 1935. R.

BRITISH STEELWORK ASSOCIATION
*Buildings for aerodromes.
2nd ed. 11″ × 8½″. Lond. [1935.] R.

MIDDLESEX *County Council*
*Report of delegation on their visit to hospitals in France, Germany and Austria. 1935.
Three more copies presented by the Council. For Loan Library.

LONDON COUNTY COUNCIL
Storage of celluloid and cinematograph film.—London County Council (Celluloid, etc.) Act, 1915—*etc.*
leaflet 13″. Lond. 1923. P.

(RELIGIOUS)

WACH (KARL), *architect*
Ev. Matthäi-kirche Düsseldorf. Architekten Prof. K— W—. Baurat Heinrich Rosskotten, *cover title.* (*No title-page or text.*)
11″×9¼″. Pls. n.p. [193—.]
Presented by the architect.

LIVERPOOL: CATHEDRAL
Quarterly Bulletin. Vol. 4, No. 42 (Dec.).
1935. R.

(EDUCATIONAL)

ESSEX EDUCATION COMMITTEE
Education in Essex 1928-35. Report . . . for the seven years ended 31 March 1935. [Including school buildings.]
9¾″. (iv) + 207 pp. + pls. Chelmsford: County Offices. 1935. 2s.
Presented by the Committee.

EDUCATION, *journal*
School construction. Supplements to "Education," 1935. [1936.] R.

FÉDÉRATION NATIONALE DU BÂTIMENT ET DES TRAVAUX PUBLICS
L'Entreprise Française, *journal.* [Special issue.] Les Laboratoires du Batiment et des Travaux Publics. . . . Paris. (Nov.)
12¾″×9¾″. 196 pp. + 32 pls. Paris. 1935. (50 fr.) R (2).

DRURY (*Mrs.* GERTRUDE) (GILBERT), *editor*
The Library and its home. Reprints of articles and addresses. (Classics of American librarianship *Series*).
7¾″. 588 pp.+front.+pls. New York: H. W. Wilson Co. 1933. 12s. 6d. P.

(DOMESTIC)

URABAYEN (LEONCIO)
La Casa Navarra. (De arquitectura popular.)
8″. 240 pp. incl. pls. + folding maps. Madrid: Espasa-Calpe. 1929. *Presented.*

MERCADAL (F. G.)
La Casa popular en España.
10″. 93 pp. + pls. Madrid: Espasa-Calpe. 1930. *Presented.*

ARCHITECTURE D'AUJOURD'HUI
* [Special number.] Habitation à bon marché. (No. 6, June.)
12½″. Paris. 1935. (30 fr.) P. *for Loan.*

NATIONAL HOUSING AND TOWN PLANNING COUNCIL
Summary of the proceedings of the . . . Conference . . . 1935.
pam. 13″. Lond. [1935.]

MODERNE BAUFORMEN, *journal*
Allgemeine pensionsanstalt Prag. (*Reprinted article.*)
11½″. Stuttgart: Hoffmann. [193—].
Presented by Dr. Josef Gocár [Hon. Corr. Mem.].

BARKING, *borough*
Souvenir of inaugural Loan Exhibition on the opening of Barking Museum: Eastbury Manor House, Barking, *etc.* [Also Abbey and Church.]
10″ × 8″. 32 pp. + pls. [Barking.] 1935. R.

DETAILS, CRAFTS, AND FITTINGS

BUILDING INDUSTRIES NATIONAL COUNCIL: ADVISORY COMMITTEE ON BUILDING ACTS AND BYELAWS
* Code of practice for the installation of lifts and escalators.
pam. 9¾″. Lond. 1935. 1s. 3d. R (2).

TANNER (HENRY), *junior*
* English interior woodwork of the XVI, XVII & XVIIIth centuries. fo. Lond. 1902.
Presented by Mr. W. Taperell Allen. Copy for Loan Library.

THOMSON (W. G.)
A History of tapestry, *etc.*
New ed. 11″. xviii + 550 pp. + pls. Lond.: Hodder & Stoughton. 1930. (£1 10s., remaindered.) P.

RUSHFORTH (G. McN.)
Medieval Christian imagery as illustrated by the painted windows of Great Malvern Priory Church, Worcestershire, together with . . . all the ancient glass in the church.
11″. xx + 456 pp. + front. + pls. (188 figs.). Oxford: Clarendon Press. 1936. £3 3s. P.

LARWOOD (JACOB) *and* HOTTEN (J. C.)
The History of signboards, *etc.*
7½″. London: Hotten. 1866. *Presented.*

BOKER (ERICH)
Broadcast reception and community aerials. (*From* Archiv für. Funkrecht. Translated.)
typescript 11″. 1935. *Presented by the B.B.C.*

ALLIED ARTS AND ARCHÆOLOGY

BOARD OF EDUCATION
Rules and syllabuses for examinations in art 1936.
pam. 9½″. Lond.: H.M.S.O. 1935. 4d. R.

FRY (ROGER) *and others*
*Chinese art. An introductory handbook, *etc.* (New ed. of Burlington Magazine, Monograph I, Chinese Art.)
10¼″. xvi + 86 pp. + 75 + 10 pls. Lond.: Batsford. 1935. 15s. R. & P.

SILCOCK (ARNOLD)
*Introduction to Chinese art.
7½″. xix + 268 pp. + front. + 17 pls. Oxford: U.P. 1935. 6s. R. & P.

DOMUS, *journal*
Arte romana. La scultura romana e quattro affreschi della Villa dei Misteri. Edoardo Persico, *ed.* (Suppt. to fasc. 96, Dec.)
15″. var. pp.+pls. [Milan.] 1935. R.

HYDERABAD: ARCHÆOLOGICAL SURVEY
Hyderabad Archæological Series.
No. 12. The Kannada inscriptions of Kopbal.
12½″ × 10″. Calcutta. 1935. (Rupees 3.) R.

SOCIETIES

INDIA: ARCHÆOLOGICAL SURVEY OF INDIA
Annual Report. 1929-30. 1935.

HYDERABAD: ARCHÆOLOGICAL SURVEY. (NIZAM'S DOMINIONS.)
Annual reports. 1931-33. 1935. R.

BUILDING SCIENCE

DEPARTMENT OF SCIENTIFIC AND INDUSTRIAL RESEARCH
Report for . . . 1934-35.
1935. 3s. R.

STRUCTURAL ELEMENTS

BENNETT (FRANK) *and* PINION (ALFRED)
Roof slating and tiling. . . . With special contributions, *etc.*
9¾″. xi + 307 pp. + pls. Lond.: Caxton Publ. Co. [1935.] £1 5s. R.

MATERIALS

DEPARTMENT OF SCIENTIFIC AND INDUSTRIAL RESEARCH: FOREST PRODUCTS RESEARCH
Records, *cont.*:—
No. 5. (Seasoning series, No. 2.) The Moisture content of timber in new buildings. By R. A. G. Knight.
9¾″. Lond.: H.M.S.O. 1935. 6d. R.

DEPARTMENT OF SCIENTIFIC AND INDUSTRIAL RESEARCH: FOREST PRODUCTS RESEARCH BOARD
Report . . . for . . . 1933.
1934. 1s. 3d. R.

CHALK (L.) *and others*
Fifteen South African high forest timber trees. (Forest trees and timbers of the British Empire, iii.)
9½″. 301 pp. + xvii pls. Oxford: Clarendon. 1935. 7s. 6d. R.

ATTWOOLL (A. W.) *and* BROOME (D. C.)
Trinidad lake asphalt.
9¾″. 56 pp.+pls. Lond.: Baynard Press. 1935. R.

NASHE STROITEL'STVO, *journal*
Beton [concrete] i zhelezobeton. Sbornik kratkikh rephereatov iz inostvannoi periodicheskoi literatury [references to periodical literature] za 1933 g. (Tsentralnaia Stroitel'naia biblioteka, *etc., series.*)
8½″. 158 pp. n.p. Ikonomicheskaia Zhizn'. 1935. R.

LEA (F. M.) *and* DESCH (C. H.)
The Chemistry of cement and concrete.
9″. xii + 429 pp. + x pls. Lond.: Edward Arnold. 1935. £1 5s. R.

COPPER DEVELOPMENT ASSOCIATION
*Copper for architecture in Sweden and Denmark. (Publication No. 18.)
13″. 28 pp. London. 1935. R.

CONSTRUCTION

KNOOP (DOUGLAS)
On the connection between operative and speculative masonry. (Address to Quatuor Coronati Lodge.)
6¾″. 59 pp. Lond. 1935. R.

KNOOP (DOUGLAS) *and* JONES (G. P.)
The Evolution of masonic organisation. *Etc.* (*From* Trans. Quatuor Coronati Lodge, xlv.)
pam. 11″. n.p. 1932. *Presented by the authors.*

DEPARTMENT OF SCIENTIFIC AND INDUSTRIAL RESEARCH: BUILDING RESEARCH
Special reports.
*No. 22. Mechanical properties of bricks and brickwork masonry. 1934. 1s. 3d. R. *Copy for Loan Library.*

OFFICE TECHNIQUE POUR L'UTILISATION DE L'ACIER (O.T.U.A.)
Acier.
1931. No. 1. La fenêtre et la porte metalliques.
No. 3. Le gratte-ciel americain.
1932. Quatres ans de construction en France d'immeubles à ossature en acier.
1934. Architecture, *etc.*
1935. Alger. Ville neuve.
—— each 10¾″. Paris. 193-. R.
Instructions pour l'établissement des ossatures, charpentes et planchers métalliques dans les constructions privées.
10¾″. Paris. [193-.] R.
Note technique.
No. 1. La résistance . . . à la fatigue.
Aciers . . . à haute resistance.
Constructions métalliques légères pour planchers . . . et tabliers de ponts, *etc.*
La Resistance au vent des ossatures, *etc.*
—— each 10¾″. Paris. [193-.] R.

UNITED STEEL COMPANIES *Ltd.*
Central Research Department.
10″×8″. 40 pp. Sheffield. [193-.] *Presented by Mr. G. H. Shipley* [*L.*].

UNITED STEEL COMPANIES, *Ltd.*
High frequency electric plant for . . . steels. (*From* The Engineer, 20 Apl.).
pam. 10″×8″. Sheffield. [1934.]

INSTITUTION OF STRUCTURAL ENGINEERS
Report on a standard method for the preparation of calculations relating to steelwork in buildings.
pam. 8½″. [Lond.] 1935. 6d. R.

ANDREWS (EWART S.)
Detail design in reinforced concrete.
8½″. (ii) + 76 pp. Lond.: Pitman. 1921. 6s. P.

SANITARY SCIENCE

GREAT BRITAIN: PARLIAMENT—ACTS
[London: Sewers.] The City of London Sewers Act, 1848. (11 and 12 Vict. cap. clxiii.)
fo. Lond. 1848.
The City of London Sewers Act, 1851. (14 and 15 Vict. cap. xci.)
fo. Lond. 1851.
[London: sewers.] City of London Sewers Act, 1897.—An Act for the dissolution of the Commission of Sewers of the City of London and to provide . . . powers, *etc.*
10¾″. Lond. 1897.
Presented by Mr. H. Alexander Pelly [*F.*].

DEPARTMENT OF SCIENTIFIC AND INDUSTRIAL RESEARCH: ILLUMINATION RESEARCH
Technical papers, *cont.*:—
No. 17. Seasonal variation of daylight illumination.
pam. 9¾″. Lond.: H.M.S.O. 1936. 4d. R.

PROOFING

FIRE OFFICES' COMMITTEE
F— O— C— Testing Station, Boreham Wood, Elstree, Herts.
pam. 8¼″. Lond. 1935. R.

ENGINEERING

SOCIETIES

IRON AND STEEL INSTITUTE
Journal. Vol. cxxxii, No. ii, 1935. 1935. R.

JUNIOR INSTITUTION OF ENGINEERS
Journal and Record of Transactions. Vol. xlv. 54th session, 1934-35.
1935. R.
(*Including*:—
Ward (C. E.). Industrial electric heating.
King (E.) and Gray (K.). Some causes for the failure of lead and lead pipes, *etc.*)

TOPOGRAPHY

AA (PIERRE VANDER), *editor*
La Galerie agréable du monde, . . . les principaux empires, . . antiquitez, . . . maisons de campagne, *etc.* Divisée en lxvi. tomes. (*Title-page and plates, mounted.*)
Domaine des Venitiens: vols. 1 and 2.
la. fo. Leide [Leyden]. [17—.] (£3 10s.) P.

TOWN AND COUNTRY PLANNING

BERETERBIDE (F. H.) *and* VAUTIER (E. E.)
Que es el urbanismo?
10½″×10½″. 48 pp. [Buenos Ayres:] H. Concejo Deliberante. [after 1932.] *Presented by the authors.*

HEGEMANN (WERNER) *and* PEETS (ELBERT)
*The American Vitruvius: an architects' handbook of civic art.
16″. New York: Archl. Book Pubg. Co. 1922. (£5 5s., reduced.) P. *Copy for Loan Library.*

HEGEMANN (WERNER)
Das Steinerne Berlin. Geschichte der grössten mietkasernenstadt der welt.
11½″. 505 pp. + 63 pls. Berlin: Kiepenheuer. [1930.] *Presented by Mr. G. Rosenberg.*

BRNO (BRÜNN), *Czechoslovakia*
Brno. Prehled historického (Übersicht der geschichtlichen, . . . entwicklung), *etc.* (*Text in Czech, German and French.*)
11¾″. 219 pp. incl. pls. n.p. [1935]. *Presented by Dr. Josef Gocár* [*Hon. Corr. Mem.*].

GREAT BRITAIN: PARLIAMENT—ACTS
[Paving.] General Paving (Metropolis) Act.—An Act for better paving, improving and regulating the streets of the Metropolis, *etc.* (57 Geo. III. cap. xxix.) fo. Lond. 1817.

TRENCH (F. W.)
A Lithographic sketch of the north bank of the Thames, *etc.*, *original cover title.*—Prospectus of the proposed improvement of the banks, *etc.*, *head title.*
(Text and plates folded.) ob. sm. fo. Lond. 1825.
—*Both presented by Mr. H. A. Pelly* [*F.*].

DASENT (A. I.)
A History of Grosvenor Square.
8¾″. xx + 252 pp. + front. + pls. Lond.: Macmillan. 1935. 15s. R.

COMMONS, OPEN SPACES AND FOOTPATHS PRESERVATION SOCIETY
Commons. What they are and how they are protected. By Humphrey Baker.
pam. 8½″. Lond. [1935.] 3d. R

Correspondence

FUNCTIONAL ASPECT OF THE GOTHIC STYLE

" *Dallinga,*"
Lower Road,
Great Bookham,
Surrey.
11.2.36.

To the Editor, JOURNAL R.I.B.A.

SIR,—In reading the very interesting second part of Mr. Gerhard Rosenberg's article on the Gothic style, I noticed (p. 368) that Henry Yevele is mentioned as the designer of Westminster Hall roof: " As . . . Henry Yevele built a model for the Hall we may expect him to have substituted the then existing posts by his hammer beam construction at its weak points."

May I point out that Yevele, as King's Master Mason, designed only the stone-work of walls and cornices, for which he made a " moulde " (as mentioned on p. 367 of Mr. Rosenberg's article).

The designer of the great timber roof itself was Hugh Herland, King's Chief Carpenter and Surveyor and Controller of the King's Works in Carpentry, who was responsible for all important timber construction in Royal works, and was the " man on the spot " at any rate as far afield as Rochester and Winchester castles. He was granted by Edward III in 1366 a little house " in the outer little ward of the Palace of Westminster " for keeping his tools and " moulds," so that he must have been well acquainted with the use of structural models when he was appointed carpenter and controller at Westminster Hall in 1393-94.

English mediæval architecture (as opposed to French) was more preoccupied with carpentry than with mason's work, and as the exponent of English timber construction at its best Hugh Herland deserves a place in the front rank of the great architects of history.

Yours faithfully,

WILLIAM HARVEY [*A.*]

17.2.36.

To the Editor, JOURNAL R.I.B.A.

DEAR SIR,—Doubtless I express the views of many of your readers in congratulating the Institute on publishing in the JOURNAL Mr. Gerhard Rosenberg's masterly thesis on " The Functional Aspect of the Gothic Style." At a time when the study of historical architecture is somewhat out of favour, it is refreshing to find a fresh mind being brought to bear upon the scientific aspects of medieval building, and unusual to encounter a taste for such problems combined with a scholarly skill in historical research. Mr. Rosenberg appears to have read widely, but he also has a definite point of view of his own, and his long thesis is a valuable contribution to knowledge.

Yours faithfully,

MARTIN S. BRIGGS [*F.*]

Notes

VACANCY IN NIGERIAN PUBLIC WORKS DEPARTMENT

The R.I.B.A. has been asked to assist in finding applicants for a post in the Nigerian Public Works Department.

The terms of the appointment are as follows :—

Candidates, aged 30-35, must be Associates of the Royal Institute of British Architects and possess Diplomas in Town Planning, as well as experience in city and urban housing schemes, and should have had practical experience in their profession and be capable of assuming responsibility.

The salary is £475 a year for two years, rising after that by annual increments to a maximum of £840 a year.

Single quarters are provided free of rent or an allowance in lieu.

First class passages are paid out and home again on the satisfactory termination of engagement.

Subject to satisfactory service, the officer appointed will be eligible at the expiration of three years' service for confirmation in the permanent and pensionable establishment.

Officers engaged for service in West Africa cannot be accompanied by their wives on first appointment.

THE RECONSTRUCTION OF QUETTA

APPOINTMENT OF CONSULTING ARCHITECT

The Secretary of State for India in Council has appointed Mr. Cyril Whitefield Lemmon [*A.*] as Civilian Consulting Architect to the Military Engineering Services, India, in connection with the reconstruction of Quetta. It is understood that the appointment carries with it a salary of £1,500 per annum. Mr. Lemmon, who is 34 years of age, joined the staff of the Liverpool School of Architecture, University of Liverpool, in 1933, and now holds the appointment of lecturer and studio instructor in charge of the fifth-year studio.

Prior to holding his present appointment Mr. Lemmon spent a number of years in America, during which time he had the advantage of special experience in reinforced concrete and other forms of construction specifically developed to resist earthquake disturbances.

Mr. Alan Munby [*F.*] was nominated by the President to serve on the selection committee. The Royal Institute has received an expression of the Secretary of State for India's " appreciation of the helpful co-operation which has been given by the Royal Institute in connection with the filling of this appointment."

ROYAL ACADEMY ARCHITECTURAL SCHOOL MEASURED DRAWINGS.

Mr. Percy Lovell, Secretary of the London Society, is endeavouring to trace the authors and whereabouts of measured drawings made for the Royal Academy School. It is of considerable importance that reliable records should exist of many of the subjects drawn by the Architectural School students. The London Society list goes back to 1772. None of the authors of the drawings are known until 1882, and the drawings of many of the subjects have themselves been lost.

If any members of the Institute can help Mr. Lovell, will they please write to him at the London Society, Lancaster House, St. James's, S.W.1.

ELECTRIC ILLUMINATION IN ARCHITECTURAL STUDIES

A representative gathering of lecturers in the chief Schools of Architecture assembled at the Lighting Service Bureau of the Electric Lamp Manufacturers' Association at Savoy Hill on 29 January for a two-day conference on the teaching of the principles of illumination. The visitors were welcomed by the manager, Mr. W. J. Jones, M.Sc., M.I.E.E., in his well-known cheery manner, and were soon making the acquaintance of some of the many models and demonstrations with which the Bureau is lavishly fitted. The course, though short, was admirably arranged to cover a wide range in a limited time. The discussions after the various lectures were helpful in bringing forward criticisms and suggestions for teaching in our schools this new medium of lighting which we find in our midst. How much to present to students is a real difficulty in architectural education, limited as we are in time and apparatus. Space does not allow me to report the conference as fully as it deserved, but the teachers attending the course are indebted to the E.L.M.A. Lighting Service Bureau and to the Board of Architectural Education for a very informative and useful course which was so excellently organised by Mr. Jones and his assistant officers.

J. Kenneth Hicks [*A.*]

THE INTERNATIONAL EXHIBITION OF ARCHITECTURE

Visit to Ipswich

In the Journal of 21 December it was stated in error that the tour of the International Exhibition of Architecture would be concluded after the Exhibition had been shown at Eastbury Manor House Museum, Barking, in February and March.

The Exhibition is to be shown at the Museum, Ipswich, under the auspices of the Suffolk Association of Architects, from 18 March to 18 April.

THE ROYAL SANITARY INSTITUTE

Sir Raymond Unwin [*P.P.*] will open a discussion on "The Housing Problem: How Planned Distribution May Prevent Crowding" at a Sessional Meeting to be held at The Royal Sanitary Institute, 90 Buckingham Palace Road, London, S.W.1, on Tuesday, 10 March, at 5.30 p.m. The chair will be taken by the Right Hon. Lord Balfour of Burleigh, the President of the Institute.

N.W. EDUCATIONAL ASSOCIATION FOR THE BUILDING INDUSTRIES

Following a series of discussions amongst building lecturers in the technical colleges and schools in the north-west area, it has been decided to establish an association, to be known as The North-Western Educational Association, for the building industry.

The association will work on similar lines to a corresponding association which has been established for some years in Yorkshire, and will have for its principal object the advancement of building education in Cheshire, Lancashire and the neighbouring counties.

The association will seek to establish closer relations between the building industry, education authorities, and technical colleges and schools in the area.

Also to assist building lecturers and students by the holding of conferences and exhibitions, and the distribution of information.

The association is to be formally inaugurated at a meeting to be held in the City of Liverpool Technical College on 7 March 1936. This meeting is to be followed by a conference at 2.30 p.m., to be held at the Liverpool School of Architecture, by the kind permission of the university authorities.

The meeting will be presided over by Professor L. B. Budden, M.A., and the principal speaker will be Mr. J. Leask Manson, H.M.I., who will speak on "The Approach to Modern Construction."

A visit to the new Building Materials Exhibition gallery of the School of Architecture will form part of the proceedings.

All who are interested in building education are invited to attend. The convener of the discussions is Mr. W. J. Stone, M.R.S.I., 17 University Road, Bootle, Liverpool, 20.

THE NATIONAL HOUSING AND TOWN PLANNING COUNCIL'S REGIONAL CONFERENCES 1936

The N.H.T.P.C. has decided to hold its usual series of regional conferences for local authorities during the coming year to discuss questions of practical importance in regard to housing and town planning administration. Conferences will be held at London, Manchester, Leeds, Newcastle-upon-Tyne, Birmingham, Nottingham, Bath, Exeter, Norwich, Carnarvon and Cardiff. The subjects for special consideration are the general housing situation; the progress of the anti-slum campaign and the administration of the Housing Acts 1925 and 1931; the overcrowding problem and the administration of the Housing Act 1935, and the Town and Country Planning Act 1932, and the Restriction of Ribbon Development Act of 1935. Full particulars can be obtained from the secretary, N.H.T.P.C., 41, Russell Square, W.C.1.

R.I.B.A. EXAMINATIONS

R.I.B.A. Examinations in 1936 and 1937 will be held on the following dates:—

Intermediate Examination

22, 23, 25, 26 and 28 May 1936. (Last day for receiving applications: 22 April 1936.)

6, 7, 9, 10 and 12 November 1936. (Last day for receiving applications: 6 October 1936.)

4, 5, 7, 8 and 10 June 1937. (Last day for receiving applications: 4 May 1937.)

12, 13, 15, 16 and 18 November 1937. (Last day for receiving applications: 12 October 1937.)

Final Examination

8, 9, 10, 11, 13, 14 and 16 July 1936. (Last day for receiving applications: 8 June 1936.)

2, 3, 4, 5, 7, 8 and 10 December 1936. (Last day for receiving applications: 2 November 1936.)

14, 15, 16, 17, 19, 20 and 22 July 1937. (Last day for receiving applications: 14 June 1937.)

8, 9, 10, 11, 13, 14 and 16 December 1937. (Last day for receiving applications: 8 November 1937.)

SPECIAL FINAL EXAMINATION

8, 9, 10, 11, 13 and 14 July 1936. (Last day for receiving applications: 8 June 1936.)

2, 3, 4, 5, 7 and 8 December 1936. (Last day for receiving applications: 2 November 1936.)

14, 15, 16, 17, 19 and 20 July 1937. (Last day for receiving applications: 14 June 1937.)

8, 9, 10, 11, 13 and 14 December 1937. (Last day for receiving applications: 8 November 1937.)

SPECIAL EXAMINATION OF LICENTIATES TO QUALIFY AS FELLOWS

30 and 31 March, 1, 2 and 3 April 1936. (Last day for receiving applications: 2 March 1936.)

26, 27, 28, 29 and 30 October 1936. (Last day for receiving applications: 25 September 1936.)

19, 20, 21, 22 and 23 April 1937. (Last day for receiving applications: 19 February 1937.)

25, 26, 27, 28 and 29 October 1937. (Last day for receiving applications: 25 August 1937.)

STATUTORY EXAMINATION FOR DISTRICT SURVEYOR AND THE EXAMINATION FOR BUILDING SURVEYOR

22, 23 and 24 April 1936. (Last day for receiving applications: 1 April 1936.)

7, 8 and 9 October 1936. (Last day for receiving applications: 16 September 1936.)

5, 6 and 7 May 1937. (Last day for receiving applications: 5 April 1937.)

6, 7 and 8 October 1937. (Last day for receiving applications: 7 September 1937.)

Obituary

ARTHUR CROW [*Retd. F.*]

Mr. Crow was the fourth son of the Rev. Thomas Crow, of The Abbey (Stratford Langthorne), Stratford, E., and a cousin of the late Mr. Philip Tree [*F.*]. Born in 1860, he was articled to Mr. J. Trant Smith, of Westminster, in 1876, joined the Architectural Association in 1880, and subsequently became managing assistant to Mr. Edmund Woodthorpe [*F.*] until his death in 1887. He was awarded First Class Honours and the Bronze Medal in the Examination in Building Construction by the Department of Science and Art at South Kensington in 1882, and was admitted to the Royal Academy Architectural School in 1883. He became an Associate of the Royal Institute in 1884 and received the certificate of competence for the office of District Surveyor in 1886. He commenced personal practice at 35 Queen Victoria Street in 1888, but relinquished this on his appointment as District Surveyor for Whitechapel in 1891. He was elected member of the Society of Arts in 1887, and passed the qualifying examination of the Association of Municipal and Sanitary Engineers in 1888. Mr. Crow was elected a Fellow of the Royal Institute in 1893 and retired in 1933. He retained his appointment in Whitechapel until 1914, when he was transferred to Finsbury, from which he retired in 1926. He was President of the District Surveyors' Association, 1919-1920.

Mr. Crow will be remembered for the proposals which he put forward for the replanning of London during the years between 1908 and 1917. For fifty years he was in daily contact with the conditions under which the very poor live and work, at first in the East End and, later, in Finsbury. His long experience as a District Surveyor left him less impressed by the artistic aspects of the architect's profession, though he was not insensitive to them, than by its bearing on the lives of the people. His first years in Whitechapel were marked by a series of successful prosecutions instituted against builders, under the London Building Act of 1894, for the use of mortar seriously deficient in lime. He was convinced that the modifications which private interests had been able to secure in that Act rendered it nugatory as an instrument for securing either decently healthy conditions or a reasonable precaution against fire. At the time of the "Stepney Motor Riot" in 1908 he revealed, in a letter to the *Daily News*, his conviction that housing and traffic were, in reality, a single problem, and argued both for a strengthening of government and municipal authority and for the construction of garden refuges in the centres of all the wider thoroughfares. By 1909 he had developed this proposal, in the Architects' Law Reports, into one for a central boulevard traversing London from Shepherd's Bush to Canning Town and wide enough to admit of an express tram service in addition to the ordinary one. His lecture before the R.I.B.A. Town Planning Conference in 1910 called for the setting up of a single authority with ample powers to deal with an enlarged County of London, 50 miles in diameter, and to establish a ring of "Cities of Health" in an ample green belt at a mean distance of 14 miles from the centre of London. He supplemented his central boulevard with a more detailed proposal for dealing with the area north of the Docks. Two years later, when the St. Paul's bridge was mooted and the Post Office site was cleared, he put forward a proposal for a relief road from Newgate Street to London Wall, in the hope of saving the Wren church of St. Vedast. In 1913, at the time of the Port of London Authority's new dock and river improvement proposals, his scheme for the housing area, modified by him to incorporate the proposals of the Traffic Branch of the Board of Trade, was adopted at a joint conference between the Garden Cities and Town Planning Association and representatives of the local authorities of the areas concerned. In consequence, he was appointed chairman of the Association's Thames-side Housing and Development Committee and signed its report in 1917. He lectured on his scheme to the London Society, under the chairmanship of Lord Devonport, in June, 1916. He was director of the N.E. sector of the London Society's "Greater London Plan." He was a strong opponent of the threatened demolition of the City Churches in 1920 and an ardent advocate of the preservation of the Foundling Site and the London Squares in 1926. After his retirement from office as District Surveyor, he became for six years a member of the Finsbury Borough Council, in order to give his services to the Housing Committee, and was accorded a special vote of thanks for his term as chairman of that Committee in 1932. It was he who identified, in 1925, the re-discovered Clerks' Well, which gave its name to Clerkenwell.

Mr. Crow was for many years a member of the Garden Cities Association and was an original member of both the London Society and the Institute of Town Planning. He was not a "modernist" or an advocate of wholesale re-planning. His ardent desire was that full powers should be taken by a strong central authority in time to secure proper conditions of sunlight and fresh air without destroying more than was unavoidable of the natural and architectural beauties of the London area.

PERCY FRANCIS WARREN [*F.*]

Mr. Percy Warren, who died on 15 January 1936, was born at Norwich in 1885. After serving his articles with Mr. George J. Skipper [*F.*] of Norwich, he was elected an Associate of the Institute in 1908 and in 1909 he started in private practice at Old Sarum, Yeovil, in partnership with Mr. John Petter [*F.*], who is carrying on the practice at the same address. Mr. Warren was elected a Fellow of the Institute in 1921.

We have received the following memoir from Mr. John Petter :—

Mr. P. F. Warren, who died on 15 January at the age of 51, was a native of Norwich. He was articled to Mr. George J. Skipper [*F.*] of that city and during the period of his pupilage I first made his acquaintance, for at that time I was an assistant to Mr. Skipper.

In 1909 we commenced private practice in partnership at Yeovil and for 27 years we worked together in perfect harmony, during which period we have been entrusted with a large volume of work in the West Country. This has been of a very varied character and includes the Yeovil Municipal Buildings, the Portland Council Offices, branches of the Westminster Bank at Yeovil and Warminster, country house work, including extensions to West Hall, Long Burton, Dorset, Marston Court, Somerset, and Windyridge, Milborne Port, Dorset, brewery work in Somerset and Dorset and a large number of factory buildings. Mr. Warren's work in connection with housing was well known in the West Country ; we have together been responsible for over 2,000 houses, a large number of which are comprised in small rural schemes. A letter from the chairman of the Yeovil R.D.C.'s Housing Committee testified to the great loss which Mr. Warren's death would be to the Housing Committee, and mentioned that to him no work was too much or trouble too great to provide the Council with the best houses that could be built for the money available, and that, in the 800 houses which had been erected by the Council, Mr. Warren had left a monument to his memory that would endure for generations to come. That testimony is one of many to Mr. Warren's great abilities, and I would add mine to his devotion and loyalty to me throughout the many years in which we have laboured together.

ANNESLEY HAROLD BROWNRIGG [*F.*]

Mr. A. H. Brownrigg, who died on 23 November 1935, was an active member of the Guildford Advisory Panel of Architects and took a very keen interest in the architectural affairs of Guildford, and particularly in all questions of civic planning.

Born in 1882, he was a pupil of Sir Ernest George, in whose office he worked. Before the war he practised at Haslemere, and throughout the war he served with the Royal Marine Artillery and the R.G.A. In 1925 he started again in private practice at Guildford in partnership with Mr. L. R. Hiscock [*F.*], who is now carrying on the practice at 30 High Street, Guildford.

Amongst the works for which the firm was responsible are the Peterborough secondary schools, won in competition, and a large amount of varied domestic work in and around Guildford.

Mr. Brownrigg was elected a Fellow of the Institute in 1920. He was also a member and at one time secretary of the Guildford Chapter of the South-Eastern Society of Architects

CHARLES SAMUEL THOMAS [*F.*]

Mr. Charles Samuel Thomas (of Messrs. C. S. Thomas and Herbert Jones [*FF.*]), a well-known Swansea architect and a past president of the South Wales Institute of Architects, died on 18 December, at the age of 61, after a long illness. Poignancy is added to his death by the fact that his wife pre-deceased him in October when he was already too seriously ill for recovery to be expected.

Member of a well-known Swansea family and son of the late Mr. S. W. Thomas, who was a leading player for Swansea at Rugby and cricket and at one time captain of the Glamorgan County Cricket Club, Mr. C. S. Thomas was educated at Swansea Grammar School and articled to Messrs. J. P. Jones & Rowlands, of Swansea and Cardiff. After completing his articles he became chief assistant to the late Mr. W. W. Williams, of Swansea, and in 1902 began practising on his own behalf, and was appointed architect to several school boards in South Wales. He designed a number of chapels in Swansea and Swansea Valley.

He was joined in 1908 by Mr. J. Herbert Jones [*F.*], with whom he was associated in practice up to the time of his death. He was for several years a member of the Swansea Rural District Council and Board of Guardians, and president of the Swansea Chamber of Trade in 1933-4. He was a Freemason.

In association with his partner, he carried out a large amount of ecclesiastical, commercial, and domestic work in Swansea and neighbourhood, and in other parts of the country.

Mr. J. Herbert Jones will continue the practice at Salisbury Chambers, Wind Street, Cardiff.

WILLIAM SMALL [*A.*]

Mr. William Small, who was killed in a motor accident in Colombo on 13 September 1935, first came to Ceylon in January 1922, at the age of 36, as assistant to Mr. P. T. Adams [*F.*], and at the end of three years joined him in partnership, and the firm of Adams & Small designed and carried out numerous works during the following years.

At Mr. Small's death the firm had just completed a large office building for the *Times of Ceylon ;* other work included a newspaper office for the *Ceylon Observer*, a grand stand at the Colombo racecourse, a swimming pool for the Galle Face Hotel, the Tea Research Institute, extensions for Cargills and Millers, the two leading stores, and numerous warehouses, " go-downs," as they are called in Colombo, for the big merchant firms. A man of great personality, the engineering side of the profession appealed to Mr. Small, and he was elected a member of the Institution of Structural Engineers in 1925. He lectured on Building Construction at the Technical Schools, and was chosen by the Institute to conduct the only one of its examinations ever held in Ceylon.

Mr. Small was very fond of sailing and a prominent member of the Royal Colombo Yacht Club. He was elected an Associate of the Institute in 1921.

Mr. P. T. Adams has not taken a very active part in the practice during the last year or two, but has travelled extensively. He has returned to Ceylon in order to wind up the affairs of the firm and expects to retire during 1936.

ALLIED SOCIETIES

MANCHESTER SOCIETY OF ARCHITECTS

Annual Dinner

The urgent need for insistence upon a higher standard in the design of houses erected by private builders, particularly on a municipal estate such as Wythenshawe, was referred to by Sir Percy Worthington at the annual dinner of the Manchester Society of Architects, which was held at the Masonic Temple, Manchester, on 31 January.

Sir Percy Worthington said the Manchester Corporation had set the country an example in the development of Wythenshawe, but they had allowed houses to be erected on their own land which were below the standard of their own houses. Surely a great corporation like Manchester, and others who were interested, ought to try to place the matter on a better footing. Many people were concerned about the " so-called " houses that were springing up everywhere, and it was a question that the nation should deal with.

Lieutenant-Colonel G. Westcott, president of the Society, said there was at present great inequality in the conditions under which people worked in great industrial areas. Some firms had built good premises, but there were many clerks, warehousemen and factory workers who worked probably eight or nine hours a day shut away from sunlight and with no real fresh air. Even to-day buildings were being erected that blocked out light and air from adjoining property, and unless those who were specially interested in planning pressed for the remodelling of industrial areas they were not using their influence to the full. " We shall never get an A1 nation unless we provide better accommodation for the industrial worker when he is actually at work," added Colonel Westcott.

Mr. Percy E. Thomas, president, R.I.B.A., suggested that there never was a better time for architects to bring home to the public the value of architecture and of what architects could do. There was still a large amount of work being done—particularly in the smaller industrial towns—by unqualified men, and this was one of the reasons why so many of the smaller towns were so deplorably ugly. The need was not for men who could pass examinations merely, but for men really qualified to design public buildings. This view should be impressed upon the public until they would no more think of carrying out architectural work without the services of an architect than they would of appointing anyone but a qualified doctor to be a medical officer. The public had to be convinced that architects could not only meet their requirements in the form of a plan, but that by their advice they could introduce efficiency and economy in industrial and municipal planning.

A most encouraging sign was the growing tendency of local authorities to make use of open competitions. Competitions held by the Manchester Corporation had produced " two fine designs from two fine architects " for the Central Library and Town Hall extension and for the Art Gallery.

Professor R. A. Cordingley, head of the Manchester University School of Architecture, said of the proposal to build a new Art Gallery on the Piccadilly site that people were in two minds about it. This was not because they were timorous of the effect such a building would produce in the square but because they were concerned at what might happen to the existing Art Gallery—" one of Manchester's treasures."

The Lord Mayor of Manchester (Alderman Thomas S. Williams) spoke of the energy with which the Corporation had set about town-planning. There was small result for the public to see yet, but before long the Town-planning Committee would show something of which the city would be proud.

Among the guests were the Bishop of Manchester (Dr. Guy Warman) and Sir Ian MacAlister, secretary of the Royal Institute of British Architects.

LIVERPOOL ARCHITECTURAL SOCIETY

On 5 February Mr. Wesley Dougill [*A.*] read a paper on " Recent Town Planning and Architecture in Italy." He asked his audience to dismiss their political feelings for a while and to consider the architectural merits of Italian work dispassionately.

He referred to the amazing progress made in recent years by which bad railways and roads, unplanned towns living still in the Middle Ages, undeveloped agriculture and inefficient national services were all turned by planning and administration into organisations which can compare in efficiency with the best. The Fascist programme could be divided into three periods of about five years each.

The first period was devoted almost wholly to unifying and co-ordinating the country from a national and political point of view, and to eliminating by drastic methods those elements which were considered subversive by the State.

The second period was concerned chiefly with the systematisation and development from a national point of view of the railways, roads and electricity, with agricultural exploitation, and with the preparatory and survey work in connection with the town-planning which was to follow. In other words, the country, in its broadest aspects was planned nationally. Train services were made up to date and punctual. The great *Autostrade* or speed roads were driven in the traditional Roman manner across the land, and every available acre of land was developed not in big nationally controlled estates but mostly in small hand-cultivated and controlled gardens. Electricity was made into a national service and used in 3,500 miles of railway—a higher percentage than in any other country.

We now come to the third and final period. It is to this period that we can ascribe most of the new buildings in Italy and the putting into execution of the town-planning schemes, which were begun as we have seen in the second period.

From the town-planning point of view the objectives have been to clear away the rubbish of centuries, to eliminate slums and raise the standard of housing of the poorer classes, to renovate and systematise the towns in order to fit them for the new traffic conditions, and to cater, by means of new towns and extensions to existing ones, for the people displaced by clearance schemes and for the rapidly growing population.

Italy, at an early stage, determined not to allow around her existing towns those unplanned, haphazard extensions which have become a universal thing in practically every other country. At the beginning of last year 30 per cent. of her towns had completed their comprehensive plans of systematisation and extension, and a further 50 per cent. were well on the way towards completing theirs. Almost without exception the plans were the result of national planning competitions, and in most cases were prepared by groups of planners. The earlier town planning was by designed accretions, but latterly the satellite town system has been adopted. Every town has its stadium, new holiday resorts have been built, and marine and mountain colonies for children.

Much Italian architecture is based on Corbusier's doctrines, and much seems immature, but so much has been done and every available architect used that this is not surprising.

Mr. Dougill suggested, in his view, that in architecture Italy, as distinct from other countries, can teach us something in at least two ways. First, the application of so-called modern design to the large monumental type of building, and, secondly, the uses of veneered finishes. The intense building activity has given her ample opportunities to demonstrate the former, and her great wealth of marbles and travertine—which is to Italy what Portland stone is to us—has made it possible for her to exploit their use as veneers to a greater extent than has been the case elsewhere.

THE BIRMINGHAM AND FIVE COUNTIES ARCHITECTURAL ASSOCIATION

At the eighth meeting of the Session, held in the Galleries of the Royal Birmingham Society of Artists on Friday, 31 January, the President, Mr. Alfred Hale [*F.*], referred to the recent death of the King, and spoke of his interest in the R.I.B.A., of which he was the Patron. The President also referred to the recent competition for the Bury Town Hall, in which the winning design was submitted by Mr. Reginald Edmonds [*A.*], a former member of the Birmingham Architectural School, and winner of the Saxon Snell Prize in 1935.

A lecture, illustrated by a number of lantern slides, was then given by Professor L. P. Abercrombie, M.A. [*F.*], on "Town Planning." This, the lecturer said, should not be merely the prevention of ugliness, but the creation of beauty, and architects, by their training, were well fitted to take a leading part in it. He then spoke of the opportunities presented by the extensive schemes of slum clearance now being carried out in many towns and the consequent rehousing of the population, which required the careful consideration both of the internal planning of the town as well as the thoughtful development of its outskirts.

Other types of opportunity were presented by the development of road transport, and the provision of electric power throughout the whole country. The latter, especially, was of the very greatest importance, for industrial developments could now take place anywhere, and were no longer, as in the past, tied to certain restricted areas. The provision of large parking spaces was another problem confronting every town in the country, and the use of internal by-pass roads for through traffic in order to relieve the congestion in shopping streets was a matter which should not be lost sight of. The necessity of providing more open spaces in cities was also emphasised by Professor Abercrombie, as well as underground connections for pedestrians, and direct exit streets, wherever possible, from the city centre to its environs.

THE SOUTH WALES INSTITUTE OF ARCHITECTS (CENTRAL BRANCH).

An interesting tea and discussion meeting was held at the Jade Cat Café, Cardiff, on Tuesday, 4 February 1936, when a representative gathering met under the chairmanship of Mr. T. Alwyn Lloyd [*F.*].

The discussion was opened by Mr. W. S. Purchon, M.A. [*F.*], who outlined the development of certain artistic crafts since the early days of machinery. He referred to the influence of William Morris and of the Arts and Crafts movement, and suggested that the development of hand craft, while excellent in itself, was not adequate, and that it is necessary to tackle the question of the right designing of machine-made articles.

He also pointed out that the building trade is one of our greatest industries, and that the question of mass production in home construction needed careful investigation. An interesting discussion followed in which Messrs. J. A. Hallam, Lewis John, A. C. Light, H. E. A. Scard, N. P. Thomas, L. W. D. Wall, and H. O. Williams took part.

During the course of the discussion it was strongly urged that the machine is not a curse and that we are not its slaves. Methods of increasing the extent to which good design is appreciated were debated, while the difficulty of obtaining well-made and well-designed furniture of a simple kind at a reasonable price was deplored.

The relative advantages and disadvantages of mass production of complete houses or alternatively of a large proportion of their parts was also discussed.

Membership Lists

APPLICATION FOR MEMBERSHIP
ELECTION : 9 MARCH 1936

In accordance with the terms of Bye-laws 10 and 11, an election of candidates for membership will take place at the Council Meeting to be held on Monday, 9 March 1936. The names and addresses of the candidates, with the names of their proposers, found by the Council to be eligible and qualified in accordance with the Charter and Bye-laws are herewith published for the information of members. Notice of any objection or any other communication respecting them must be sent to the Secretary R.I.B.A. not later than Tuesday, 3 March 1936.

AS HON. CORRESPONDING MEMBERS (2)

ARKIN : DAVID EPHIMOVITCH, Professor of History of Architecture, Architectural Academy (Moscow) and Institute of Architecture ; Member of Committee, Union of Soviet Architects ; Rojdestvenka 23, Moscow. Proposed by the Council.

COLLEY : NICHOLAS, Professor of Architecture ; Flat No. 5, Zemledeltchesky per N.9, Moscow 2. Proposed by the Council.

AS FELLOWS (5)

CASH : HERBERT WILLIAM [*A.* 1919], 31 Great James Street, W.C.1 ; "Bincleaves," Herries Road, Hillingdon, Middlesex. Proposed by Leonard A. Culliford, Herbert W. Wills and Lt.-Col. B. Culmer Page.

DAWE : SYDNEY [*A.* 1896], 83 High Street, Watford ; West Winds, The Drive, Rickmansworth. Proposed by R. G. Muir, Percy V. Burnett and C. J. Eprile.

MACKENZIE : KENNETH BEAUMONT, M.C. [*A.* 1919], "Holly Cottage," Ablington, Bibury, Gloucestershire. Proposed by Harry Redfern, T. M. Wilson and Harold I. Merriman.

MUSMAN : ERNEST BRANDER, B.A.Lond. [*A.* 1915], 7 Carteret Street, Westminster, S.W.1 ; "Greenash," Chiswick Mall, W.4. Proposed by Professor A. E. Richardson, C. Lovett Gill and Charles Cowles-Voysey.

And the following Licentiate who has passed the qualifying Examination :—

STILLMAN : ARCHIBALD CHARLES HENRY, Deputy Architect, Staffordshire Education Committee, Earl Street, Stafford ; "Byways," Castle Bank, Stafford. Proposed by W. H. Robinson, Edwin A. Jackson and Charles J. Cable.

AS ASSOCIATES (72)

ARTHUR : GEORGE [Passed five years' course at the Glasgow School of Architecture. Exempted from Final Examination], Glentore, Airdrie, Scotland. Proposed by Launcelot H. Ross, William J. Smith and T. Harold Hughes.

ATKINSON : WALTER WARNE [Passed five years' joint course at the Department of Architecture, The Northern Polytechnic (London) and the Architectural Association. Exempted from Final Examination], 71 Corinne Road, Tufnell Park, N.19. Proposed by Howard Robertson, J. Murray Easton and Oswald P. Milne.

BEECROFT : CHARLES ROY [Final], "Denstone" Nore Road, Portishead, Somerset. Proposed by C. F. W. Dening, B. F. G. Wakefield and G. D. Gordon Hake.

BOWEN : HARMAN AARON [Final], 7 Tennyson Avenue, Twickenham, Middlesex. Proposed by J. H. Forshaw, J. Herbert Jones and L. Stuart Stanley.

BRADLEY : GEORGE BIRCHENALL [Final], 60 Wilberforce Road, Finsbury Park, N.4. Proposed by Edwin Williams, W. Baxter Sinclair and W. Leonard Dowton.

BROOKS : ARTHUR [Final], The Cottage, Mottram Old Road, Stalybridge, Cheshire. Proposed by C. Gustave Agate and the President and Hon. Secretary of the Manchester Society of Architects under the provisions of Bye-law 3 (a).

BROWN : STANLEY TREVOR [Final], 81 Queen's Road, Bootle, Liverpool, 20. Proposed by L. Stuart Stanley, L. H. Keay and R. A. Landstein.

BURNETT : LESLIE HOWARD, B.Arch. [Passed five years' course at, the School of Architecture, University of Liverpool. Ex-t empted from Final Examination], 36 Barndale Road, Liverpool 18. Proposed by Professor Lionel B. Budden, J. Ernes Marshall and Edward R. F. Cole.

CHASSER : GEORGE MCDONALD [Final], 19 Westleigh Road, Leicester. Proposed by George Nott, Clement Stretton and J. Stockdale Harrison.

COLCLOUGH : THOMAS JAMES HANCOCK [Final], "Lyngarth," Clough Hall, Kidsgrove, Stoke-on-Trent. Proposed by L. Stuart Stanley, W. F. Slater and E. T. Watkin.

COOPER : ARTHUR ERNEST [Final], 19 Broadoaks Road, Church Road, Flixton. Proposed by L. Stuart Stanley, G. Noel Hill and Col. George Westcott.

COOPER : LAURENCE WILLIAM ALEXANDER [Final], 152 Evington Road, Leicester. Proposed by William Keay, George Nott and T. Trevor Sawday.

CREMER : LEWIS BERNARD HENRY [Final], 128 High Street, Newington, Sittingbourne, Kent. Proposed by S. H. Loweth, W. H. Robinson and R. A. Cooksey.

DOUGLAS : JAMES [Passed five years' course at the School of Architecture, Edinburgh College of Art. Exempted from Final Examination], "Old Sarum," 20 Herbert Road, Stockwell, S.W.9. Proposed by Oliver Hill, Alex. T. Scott and L. H. Bucknell.

DUMBLE : ALAN [Final], 25 Montrose Gardens, Sutton, Surrey. Proposed by J. H. Forshaw, Professor Patrick Abercrombie and Joseph Addison.

DUNGEY : WILLIAM JOHN HUGH [Final], 8 Upper Knollys Terrace, Pennycomequick, Plymouth. Proposed by J. Leighton Fouracre, A. Southcombe Parker and A. C. Norman.

DYER : LEONARD STACEY [Final], 79 Brightwell Avenue, Westcliff-on-Sea, Essex. Proposed by William H. Hamlyn, H. J. Connal and Niel Martin-Kaye.

ELSEY : ARTHUR VALENTINE [Passed five years' course at the Architectural Association. Exempted from Final Examination], 33 Norland Square, W.11. Proposed by John Grey, L. H. Bucknell and Howard Robertson.

EPPS : MISS CAMILLA ELISABETH [Passed five years' course at the Architectural Association. Exempted from Final Examination], 4A Blenheim Road, London, N.W.8. Proposed by Howard Robertson, A. H. Moberly and J. Alan Slater.

FORBES : JOHN [Final], c/o Ramsay, 51 Roseburn Terrace, Edinburgh. Proposed by John Begg, J. Ross McMillan and James McLachlan.

FOWLER : NORMAN HAROLD [Final], 107 Hall Lane, Leeds, 12. Proposed by John C. Procter, Blakeley R. Gribbon and G. H. Foggitt.

FOX : EWART LYNDALL [Final], "Lynbrook," Swallowcliffe Gardens, Yeovil, Somerset. Proposed by John Petter, Arthur J. Pictor and G. D. Gordon Hake.

FURNISS : MARTIN DUMVILLE [Passed five years' course at the Architectural Association. Exempted from Final Examination], 6 Broomhill Road, Woodford Green. Proposed by L. H. Bucknell, John Grey and Howard Robertson.

GALLOWAY : WILFRED BONHAM [Passed five years' course at the Bartlett School of Architecture, University of London. Exempted from Final Examination], 170 Little Heath Road, Selsdon, Surrey. Proposed by Professor A. E. Richardson and applying for nomination by the Council under the provisions of Bye-law 3 (d).

GERRARD : PHILIP [Final], 21 Leonard Avenue, Sherwood, Nottingham. Proposed by Major T. Cecil Howitt, Major Charles H. Calvert and H. Alderman Dickman.

GILLAM : DAVID RODNEY [Passed a qualifying Examination approved by the Board of Architectural Education of the Royal Australian Institute of Architects], 41 Worcester Road, Sutton, Surrey. Proposed by H. Austen Hall, Humphrey C. D. Whinney and And. N. Prentice.

GOULDEN : GONTRAN ICETON [Passed five years' course at the Bartlett School of Architecture, University of London. Exempted from Final Examination], 34 Cartwright Gardens, W.C.1. Proposed by Professor A. E. Richardson, L. Stuart Stanley and Graham R. Dawbarn.

HICKS : TREGARTHEN CHARLES GLANVILLE [Special partial exemption from Final Examination. Passed Examination in Thesis], 81 Abingdon Road, Kensington, W.8. Proposed by Joseph Emberton, L. H. Bucknell and Francis Lorne.

HOARE : ERIC LESTER TREADAWAY [Final], 21 Court Way, Twickenham. Applying for nomination by the Council under the provisions of Bye-law 3 (d).

HOUFE : ERIC ALFRED SCHOLEFIELD [Final], 38 St. Augustine's Road, Bedford. Proposed by Professor A. E. Richardson, C. Lovett Gill and L. Stuart Stanley.

HOUGH : ERIC [Final], Earlsleigh Cottage, Groby Road, Altrincham, Cheshire. Proposed by Col. George Westcott, C. Gustave Agate and Harry S. Fairhurst.

JACKSON : HARRY [Final], 63 Chelverton Road, Putney, S.W.15. Proposed by E. P. Wheeler, N. Elliot and E. G. Bax.

JONES : DAVID ARCHIBALD [Final], 15 Orsett Terrace, W.2. Proposed by J. Cook Rees and applying for nomination by the Council under the provisions of Bye-law 3 (d).

KERR : ADAM BRYCE [Passed five years' course at the School of Architecture, Edinburgh College of Art. Exempted from Final Examination], 41 Comely Bank Road, Edinburgh. Proposed by John Begg, T. F. Maclennan and E. J. MacRae.

KWAN : WING HONG [Passed five years' course at the Architectural Association. Exempted from Final Examination], 29 Westbourne Terrace, Hyde Park, W. Proposed by John Grey, L. H. Bucknell and Howard Robertson.

LE MARE : BERNARD ARTHUR [Passed five years' course at the Architectural Association. Exempted from Final Examination], 29 The Drive, Walthamstow, E.17. Proposed by H. Lidbetter, J. H. Forshaw and E. Stanley Hall.

LOWRY : WILFRED LAURENCE [Final], 77 Ashton Road, Hillside, Southport. Proposed by L. Stuart Stanley, Isaac Taylor and Col. George Westcott.

LYONS : EDWARD DOUGLAS [Final], 3 Paul's Bakehouse Court, E.C.4. Proposed by Charles Cowles-Voysey, H. Edmund Mathews and A. H. Jones.

M'CAUGHAN : REGINALD ELLERSLEY MANIFOLD [Passed five years' course at the Liverpool School of Architecture, the University of Liverpool. Exempted from Final Examination], Mount Auburn, Finaghy Park, Belfast, Ulster. Proposed by Professor Lionel B. Budden, Edward R. F. Cole and Ernest Marshall.

MANN : ROBERT HARWOOD [Passed five years' course at the Leeds School of Architecture. Exempted from Final Examination], 206 Abbey Road, Kirkstall, Leeds, 5. Proposed by H. V. Lanchester, T. A. Lodge and Max R. Hofler.

METAYERS : HENRY ALFRED [Special Final Examination], 4 Guilford Lawn, Marine Parade, Dover, Kent. Proposed by L. Stuart Stanley, Col. Sir John Brown and Lt.-Col. E. W. G. Short.

NORTH : THOMAS EUGENE [Special Final Examination], 29 Shirley Gardens, Barking, Essex. Proposed by John H. Jacques, Alfred Cox and A. H. Jones.

PARKER : ROBERT GEOFFREY [Passed five years' course at the Liverpool School of Architecture, University of Liverpool. Exempted from Final Examination], c/o City Engineer's Office, Norwich. Proposed by Herbert J. Rowse, Professor Lionel B. Budden and J. Ernest Marshall.

PITT : HAL LUNGLEY [Final], 9 West Cromwell Road, Earl's Court, S.W.5. Proposed by E. P. Wheeler, N. Elliot and E. G. Bax.

POWELL : JOHN ARDERN, B.A. [Passed five years' joint course at the School of Architecture, Cambridge University and the Architectural Association. Exempted from Final Examination], 3 Lower Terrace, Torquay. Proposed by H. Cecil Powell, H. C. Hughes and Howard Robertson.

PRIESTMAN : HAROLD DENT [Final], 2 West Parade, Anlaby Road, Hull. Proposed by J. Malcolm Dossor, G. Dudley Harbron and H. Andrew.

RANSOM : GEOFFREY FREDERICK [Passed five years' course at the Liverpool School of Architecture, University of Liverpool. Exempted from Final Examination], 29 Holland Park Avenue,

W.11. Proposed by Granville E. S. Streatfeild, Darcy Braddell and Arnold F. Hooper.

REECE : NOEL LEES [Final], 23 Victoria Road North, Southsea Hants. Proposed by Ernest J. Thomas, J. W. Walmisley and A. C. Townsend.

REID : JAMES GEORGE [Final], Bute House, Gardens Road, Clevedon, Somerset. Proposed by J. Leighton Fouracre, A. Southcombe Parker and A. C. A. Norman.

RISDON : FRANK HERIOT [Passed five years' joint course at the Department of Architecture, The Northern Polytechnic (London) and the Architectural Association. Exempted from Final Examination], 3 Heber Road, East Dulwich, S.E.22. Proposed by Howard Robertson, W. S. Grice and The Hon. Humphrey Pakington.

RUSSELL : ARTHUR FREDERICK [Final], 4 Regent Square, W.C.1. Proposed by R. Goulburn Lovell, Joseph Addison and Edwin L. Williams.

SHORT : HAROLD [Final], 25 West Park Avenue, Kew Gardens, Surrey. Proposed by Professor A. E. Richardson, Alexr. G. Bond and L. Stuart Stanley.

SIGGERS : RAYMOND RUSH [Final], 6 Evington Road, Leicester. Proposed by George Nott, T. Trevor Sawday and Clement Stretton.

SOMJEE : HABIB JUSABBHOY ALLADINBHOY, B.A., Dip.Arch.(Lond.) [Passed five years' course at the Bartlett School of Architecture, University of London. Exempted from Final Examination], Hill View, Vale of Health, Hampstead, N.W.3. Proposed by Professor A. E. Richardson, L. Stuart Stanley and Professor Patrick Abercrombie.

STOWER : FRANK [Final], 21 Nower Road, Dorking, Surrey. Proposed by Henry A. Douglass, P. T. Wilsdon and Joseph Addison.

SUTTON : ALLAN [Final], 41 First Avenue, Walthamstow, E.17. Proposed by G. Leonard Elkington, L. H. Shattock and Joseph Addison.

TABERNER : EDGAR [Final], The Old Palace, Chester. Proposed by John Bradshaw Gass, Arthur J. Hope and James R. Adamson.

TAYLOR : ERNEST [Final], 28 Eden Street, Edentown, Carlisle. Proposed by R. H. Gibson, R. S. Wilshere and Thomas R. Eagar.

THOMAS : ARTHUR ALBERT [Final], 85 Hawstead Road, Rushey Green, S.E.6. Proposed by Chas. M. Swannell, Alexr. G. Bond and M. Campbell-Jones.

TIMMIS : GEORGE CHARLES [Passed five years' course at the Liverpool School of Architecture, University of Liverpool. Exempted from Final Examination], Earlsfield House, 31-32 Courtfield Gardens, Earl's Court, S.W.5. Proposed by Professor Lionel B. Budden, J. E. Marshall and Edward R. F. Cole.

TOWNSEND : DOUGLAS CHARLES [Final], "Bibury," Bexton Road, Knutsford, Cheshire. Proposed by Harry S. Fairhurst, Col. George Westcott and Francis Jones.

TWEDDELL : NOEL [Final], 34 Jubilee Place, S.W.3. Proposed by Edward A. Hunt, H. S. Goodhart-Rendel and Gerald Unsworth.

WEIR : ERNEST JOHN [Final], 3 Viewforth Square, Edinburgh. Proposed by John Begg, T. F. Maclennan and E. J. MacRae.

WEST : FRANK GEORGE [Final], 106 Wyatt Park Road, Streatham Hill, S.W.2. Proposed by A. Edgar Beresford, Joseph Addison and M. H. B. Scott.

WESTON : NORMAN ERNEST GODFREY [Final], 71 Waterpark Road, Prenton, Birkenhead. Proposed by Bertram Ashworth, W. Glen Dobie and W. P. Horsburgh.

WHATMORE : CHARLES SYDNEY [Special Final Examination], 31 Wyndham Road, Kingston-on-Thames. Proposed by Joseph Addison, Henry A. Douglass and Edwin L. Williams.

WHEATLEY : NORMAN [Final], 105 Whinney Lane, Blackburn. Proposed by Norman Jones, Albert Schofield and applying for nomination by the Council under the provisions of Bye-law 3 (d).

WILSON : EDWARD PATRICK [Final], "Redwing," Townsend Drive, St. Albans. Proposed by Thomas Rayson, Julian Leathart and R. Fielding Dodd.

WILSON : RONALD JOHN [Final], 50 Sutton Passeys Crescent, Wollaton Park, Nottingham. Proposed by Francis Lorne, W. David Hartley and F. Winton Newman.

WOOD : LESLEY [Final], The Oaklands, Allestree, Derby. Proposed by G. Hanson Sale, George M. Eaton and George H. Widdows.

YOUNG : LEONARD JAMES [Final], 5 New Street, St. Martin's Lane, W.C.2. Proposed by C. H. James, G. Grey Wornum and John Grey.

YOUNG : RONALD MCPHERSON WATSON [Final], "Coniston," 4 Morven Drive, Troon, Ayrshire, Scotland. Proposed by T. Harold Hughes, William J. Smith and A. G. Henderson.

AS LICENTIATES (5)

DUREY : PRESTON BURRELL, Borough Engineer's Office, Town Hall, Sunderland ; 67 Stratford Avenue, Sunderland. Proposed by S. W. Milburn and the President and Hon. Secretary of the Northern Architectural Association under the provisions of Bye-law 3 (a).

EDGINGTON : HENRY JOHN, 125 Radley Road, Abingdon, Berks. Proposed by A. Buller West, R. Fielding Dodd and N. W. Harrison.

FRYER : ARTHUR BERNARD STEPHENSON, "Lynton," Barnston Road, Thingwall, Wirral, Cheshire ; c/o Birkenhead Corporation, Town Hall, Birkenhead. Proposed by Robert Martin and the President and Hon. Secretary of the Manchester Society of Architects under the provisions of Bye-law 3 (a).

SMITH : FREDERICK CARTER JOHN, c/o Messrs. Sir John Brown & A. E. Henson, 83 St. Giles' Street, Northampton. Proposed by Sir John Brown and the President and Hon. Secretary of the Northamptonshire, Bedfordshire and Huntingdonshire Association of Architects under the provisions of Bye-law 3 (a).

THURLEY : CYRIL FREDERICK JAMES, 35 Victoria Street, Paignton ; 180 Torquay Road, Paignton. Proposed by Harold B. Challen, Andrew Mather and W. Lee Clarke.

Election of Members

In accordance with the terms of Bye-laws 10 and 11, the following candidates for membership were elected at the Council Meeting held on Monday, 10 February 1936.

AS FELLOWS (7)

BARTLETT : PERCY JAMES [*A.* 1922], Nottingham.

COLE : ERIC [*A.* 1922], Cirencester.

HAMILTON : IAN BOGLE MONTEITH, B.A.Oxon [*A.* 1920].

LEWIS : WILLIAM JOHN [*A.* 1921].

YATES : CHARLES WILLIAM, F.S.I. [*A.* 1922], Gloucester.

And the following Licentiate who has passed the qualifying Examination :—

LONGSTAFF : THOMAS HENRY, Huntingdon.

And the following Licentiate who is qualified under the provisions of Section IV, Clause 4 (c) (ii) of the Supplemental Charter of 1925 :—

TAGGART : WILLIAM DAVID REDMOND, Belfast.

AS ASSOCIATES (23)

BAIRD : MISS MARGARET MACDONALD [Passed five years' joint course at the Liverpool School of Architecture, the University of Liverpool and the Welsh School of Architecture, the Technical College, Cardiff. Exempted from Final Examination].

BROWNRIGG : JOHN EDWARD ANNESLEY, B.A.(Arch.)Lond. [Passed five years' course at the Bartlett School of Architecture, University of London. Exempted from Final Examination].

CASSIDY : GEORGE EDWARD [Passed five years' course at the Bartlett School of Architecture, University of London. Exempted from Final Examination], Farnborough.

CRANE : MISS YVONNE [Passed five years' joint course at the Department of Architecture, Northern Polytechnic, London, and the Architectural Association. Exempted from Final Examination].

GALLOWAY : ERIC MELVIN [Passed five years' course at the School of Architecture, Robert Gordon's Colleges, Aberdeen. Exempted from Final Examination], Slough.

GRACE : JOHN GREENFIELD [Final].

HUGHES : ALASTAIR SYDNEY WHITLOCK [Passed five years' joint course at the Architectural Association, London, and the School of Architecture, University of Sydney. Exempted from Final Examination].

LEWIS : DAVID HAROLD [Passed five years' course at the Welsh School of Architecture, The Technical College, Cardiff. Exempted from Final Examination], Eastbourne.

MACARTNEY : ROBIN HALLIDAY [Passed five years' course at the Architectural Association. Exempted from Final Examination].

MEDLYCOTT : THOMAS ANTHONY HUTCHINGS [Passed five years' course at the Bartlett School of Architecture, University of London. Exempted from Final Examination].

MITCHELL : DOUGLAS WILLIAM, B.A.Cantab [Passed five years' course at the Architectural Association. Exempted from Final Examination].

OUZMAN : ROSCOE HERBERT [Passed five years' joint course at the Department of Architecture, Northern Polytechnic (London) and the Architectural Association. Exempted from Final Examination].

OWEN : EVAN HUGH, Dip.Arch.Cardiff [Passed five years' course at the Welsh School of Architecture, The Technical College, Cardiff. Exempted from Final Examination], Pretoria, South Africa.

PHILLIPS : Miss MARGARET MARY [Passed five years' course at the Architectural Association. Exempted from Final Examination].

PURVIS : RICHARD, B.A.(Arch.) [Passed five years' course at the Bartlett School of Architecture, University of London. Exempted from Final Examination].

READ : Miss BERYL JOY [Passed five years' course at the Architectural Association. Exempted from Final Examination].

RICE : ALWYN EDWARD, B.Arch.Liverpool [Passed five years' course at the Liverpool School of Architecture, University of Liverpool. Exempted from Final Examination], Rock Ferry.

SHERWELL : Miss EILEEN MARY [Passed five years' course at the School of Architecture, Edinburgh College of Art. Exempted from Final Examination], Edinburgh.

STEEL : DONALD [Passed five years' course at Leeds School of Architecture. Exempted from Final Examination].

THOMPSON : PATRICK MCGOWAN [Passed five years' course at the School of Architecture, Edinburgh College of Art. Exempted from Final Examination], Lerwick, Shetland.

WALKER : Mrs. WILLIAMINA KATHERINE [Passed five years' course at the Architectural Association. Exempted from Final Examination].

WARNE : ERNEST WILLIAM [Special Final Examination], Claremont, Western Australia.

WILKINS : LEONARD TOM [Passed five years' course at the Bartlett School of Architecture, University of London. Exempted from Final Examination].

AS LICENTIATES (7)

EASTICK : CYRIL WALTER.

GIBSON : GEORGE EMBLETON, Newcastle-on-Tyne.

HEPPENSTALL : NOEL, Huddersfield.

KELLY : PERCY ASHBURNHAM.

LUNN : JOHN ERNEST, Huddersfield.

ROWE : ERIC KINGDON.

WRIGHT : NORMAN, Liverpool.

ELECTION OF STUDENTS R.I.B.A.

The following were elected as Students R.I.B.A. at the meeting of the Council held on 10 February 1936 :—

ALLAN : ALFRED EASTON, 39 Queen's Road, Aberdeen.

BEATON : DOUGLAS, 10 North Street, Inverurie, Aberdeenshire.

BENNETT : ARCHIBALD ERNEST, 35 Desswood Place, Aberdeen.

COGHILL : JOHN LAMONT, Dunrobin, Golspie, Sutherland.

ELFORD : ERIC BENJAMIN, Wyverns, Wareham Road, Upton, Poole, Dorset.

GAVRONSKY : ASHER BARUCH BENEDICT, 4 Eaton Avenue, London, N.W.3.

GAYTON : JAMES DONALD, 27 Edgefauld Road, Glasgow, N.

GNEDITCH : GEORGE, 30 Store Street, London, W.C.1.

GUPTE : GANESH SHANKER, Raopura Road, Baroda, India.

HANSTOCK : ARTHUR GILBERT, Branch Road, Batley.

HICKS : GLANVILLE, 81 Abingdon Road, Kensington, W.8.

HUMPHREYS : ARTHUR FREDERICK, Norbury Vicarage, Hazel Grove, Stockport.

HUNTER : ARNOLD MCKENZIE, Woodlands, Lothian Bank, Eskbank, Midlothian.

LACEY : KENNETH LLOYD JAMES, 109 Uppingham Road, Leicester.

LARKIN : GEORGE ISMAY, 36 Breedon Hill Road, Derby.

MARGO : HAROLD DAVID, Liverpool School of Architecture, University of Liverpool.

MILES : JOHN VERNON MANERS, Little Warren, Church Lane, Loughton.

NEISH : JAMES SYMERS, 6 Bingham Terrace, Dundee.

PEARCE : DERRINGTON STANLEY, 45 St. John's Villas, London, N.19.

PICKERSGILL : ERIC ROLAND, St. Barnabas Clergy House, Pimlico, S.W.1.

PICKUP : GEOFFREY, 7 Braeside, Blackburn.

PRATTEN : FREDERICK RALPH, "Ellsworth," Norton Hill, Midsomer Norton, Near Bath.

SCOTT : THOMAS KAY, 42 Barton Street, Moss Side, Manchester.

SEWARD : ROBERT JOHN, c/o Government Architect, Wellington, C.1, New Zealand.

SOUTAR : DAVID STEWART, c/o The Architectural Association, 34 Bedford Square, London, W.C.1.

STARLING : LEONARD BECKWITH, c/o Mrs. Howe, 23 Lovaine Place, Newcastle-on-Tyne, 2.

THORNTON : FREDERICK, Stainborough, Near Barnsley, Yorks.

TOMALIN : ROGER RIDLEY, Hazelglen, Sanderstead, Surrey.

WRIGHT : JAMES, 40 Fullarton Drive, Troon, Scotland.

ZAMMIT : ARTHUR JOHN, 6 Shamrock Street, Clapham, S.W.4.

ELECTION OF STUDENTS R.I.B.A.

The following were elected as Students R.I.B.A. at the meeting of the Council held on 13 January 1936.

ALEXANDER : WILLIAM, 1 Monnery Road, Highgate, N.19.

ASBRIDGE : VINCENT BARNES, "Blencathra," Hurst Road, Bexley, Kent.

ATHORPE : MARMADUKE CARVER MIDDLETON, Dinnington Hall, Sheffield.

BACKHOUSE : ARTHUR GRAHAM, 71 Marquess Road, Canonbury, N.1.

BAIRD : JAMES, 116 Hawkhead Road, Paisley.

BARKER : ALFRED JAMES, 5 Newton Road, Heaton, Newcastle-upon-Tyne.

BLAKESLEY : DOUGLAS ARTHUR, 29 St. Philips Road, Leicester.

BODDY : JAMES WILLIAM, 8 Hughenden Road, Norwich.

BOYD : (Miss) DIANA FLORENCE, 1 Redington Gardens, N.W.3.

BREWSTER : KENNETH ARTHUR, 107 Oak Street, Norwich, Norfolk.

BROWN : THOMAS LESLIE, 6 East Parade, Driffield, E. Yorks.

BRUCE : ALBERT HENRY, Petwood, High Road, Whetstone, N.20.

BUCK : BERNARD, 59 Ferndale Road, Clapham North, S.W.4.

CALDER : DOUGLAS WILLIAM MCNAIR, 10 Tewkesbury Drive, Prestwich, Lancs.

CHAPMAN : RONALD FREDERICK HENRY, 24 Ashford Road, Maidstone.

CLARK : JAMES NELSON, 17 Pomeroy Street, Cardiff.

COATES : WALTER SIDDALL, 21 Burton Stone Lane, York.

COMRIE : (Miss) ELIZABETH FERGUS, 25 Manor Place, Edinburgh.

COOMBS : RALPH WILLIAM, 20 Catherine Hill, Frome, Somerset.

COWAN : RONALD, "Karridale," Darlington Road, Hartburn, Stockton-on-Tees.

COX : GEOFFREY, 162 Beeches Road, West Bromwich, Staffs.

CROOKES : ROWLAND, 22 Chestnut Road, Plymouth, Devon.

DAVIDGE : (Miss) MARGARET MARY, 67 Blackheath Park, S.E.3.

DEWEY : ALAN CLIFFORD, 10 Peterboro' Villas, S.W.6.

DICKSON : FREDERICK WILLIAM, 4 Salmon Pool Lane, Exeter.

EVANS : WILLIAM TREVOR, 3 Balham Park Road, S.W.12.

GOLD : BERNARD, 54 St. James's Road, Croydon.

GREENWELL : (Miss) KATHLEEN MARGARET, Silvermere, Woodside Avenue, N.12.

HIBBERD : LEO ROY, Enderleigh, West Street, Havant, Hants.

HILLMAN : WILFRED, 20 Chesham Place, S.W.1.

HODGES : DAVID MICHAEL, 38 Cheyne Court, Chelsea, S.W.3.
HODGSON : CHARLES WILLIAM, 34 Capel Road, Forest Gate, E.7.
HORSBURGH : IAN HEPBURN, 30 Store Street, W.C.1.
HORSFALL : GEOFFREY FARNELL, "Bollard," Cross Cop, Heysham.
HYDE : LEONARD ARTHUR, 46 Stanway Road, Earlsdon, Coventry.
JOHNS, WILLIAM EDWARD FIELD : Hoe Lodge, 49 North Park, Eltham, S.E.9.
JONES : AUBREY CHAVE, 1 Carlyle Road, West Bridgford, Notts.
KARANJGAOKAR : DATTATRAYA GANGADHAR, 14 Chandra Terrace, Kandewadi, Bombay, 4.
KOTHARI : NARENDRA KUVERGI, c/o Messrs. Master, Sathe & Bhuta, 41 Haman Street, Fort, Bombay.
LAMBERT : RONALD, 24 Thursby Street, Bradford Moor, Bradford.
LAWSON : THEODORE FRASER, Tyny Green, The Bourne, Southgate, N.14.
LEAH : EGBERT ALFRED, Elton Villa, Hucclecote, Gloucester.
LEE : GORDON, 10 Pretoria Road, Canterbury.
LEWIS : JOHN ANTONY, 55 Stokewood Road, Bournemouth, Hants.
LEWIS : JOHN THEODORE, 36 Whiteford Road, Mannamead, Plymouth.
LISTER : NORMAN, 36 Middleton Street, Hull.
LOYD : JOHN CLULOW, "Mill Hill," Otham Lane, Ashford Road, Maidstone.
MCCALL : NORMAN FOTHERINGHAM, 24 Madeira Road, Streatham, S.W.16.
MALLETT : ARTHUR EDWARD LESLIE, 10 Gamlen Road, Putney, S.W.15.
MANSON : BEN MURRAY, 32 Almond Bank Terrace, Edinburgh.
MENDUS : HOWEL, 47 Pyrland Road, Highbury, N.5.
MERRETT : VICTOR ROBERT JOSEPH, 101 Wilton Street, Stoke, Devonport.
MIDDLETON : ALLEN, Bleak House, Victoria Street, Glossop, Derbyshire.
MIDDLETON : COLIN MACAULAY, 3 St. Andrew's Street, Dumfries, Scotland.
MILLNER : GEOFFREY FORD, Colnside, Bibury, Cirencester, Gloucestershire.
MILNE : WILLIAM FRASER, 7 Peel Street, Lochee, Dundee.
MOSS : GEOFFREY, "Talgarth," Portland Road, Eccles.
MURPHY : CHARLES GIBSON, 5 Linden Terrace, Sunderland.
NEAVES : JACK SIDNEY, 100 Hastings Road, Maidstone, Kent.
OWEN : DAVID BRASIL, Tyglyn, Ty-Glas Road, Llanishen, Cardiff.
PIAZZA : CHARLES ACHILLES, 1 Blenheim Gardens, Wembley Park, Middlesex.
PURCELL : DONOVAN COLE, 16 The Close, Norwich.
PYE : DAVID WILLIAM, Buckhurst Manor, Wadhurst, Sussex.
RENNIE : ARTHUR, 431 Clarkston Road, Muirend, Glasgow, S.4.
RILEY : HARRY STANLEY, 3 Gloucester Avenue, Levenshulme, Manchester.
ROHM : KARL ROBERT, 90 Sheaveshill Avenue, Hendon, N.W.9.
SEYMOUR : KENNETH JAMES HYDE, 118 Princes Avenue, W.3.
SOUTHEY : JOHN BLACKMORE, 28 Mill Road, Eastbourne, Sussex.
SPOONER : JAMES CORKING, 16 Charteris Road, Woodford Green, Essex.
STAZIKER : FRED, 17 Frederick Row, Furthergate, Blackburn.
SUNDERLAND : ERIC STANLEY, "Glen Side," 29 Fifth Avenue, York.
TAFFENDER : WILLIAM CLIFFORD, 46 Clarence Park Road, Bournemouth.
TARLING : CHARLES, 9 Fernshaw Road, Chelsea, S.W.10.
TOOTH : DOUGLAS RONALD NOEL, 56 Curzon Street, Mayfair, W.1.
TURNER : FRANK, 64 Bath Street, Ilkeston, Derbyshire.
WALKER : PERCY EDWARDS, 47 Castle Street, Abergavenny, Monmouthshire.
WALLER : ROBERT ERIC, 18 Stella Street, Mansfield, Notts.
WATSON : RONALD JAMES WILLIAM, 58 King's Drive, Surbiton, Surrey.
WEBB : CHARLES CECIL GEORGE, 12 Sefton Street, Timaru, New Zealand.
WHITEHORN : JOHN EDWARD, 26 Chaucer Street, Nottingham.
WHITELAW : ALEXANDER ROBERTSON, "Villierfield," Neilston, Renfrewshire.
WILDGUST : ALBERT, 32 Princess Road, Shaw, Lancashire.
WILKINSON : JACK MULLINEAUX, 13 Lord Street, Brierfield, Nr. Burnley, Lancashire.
WILLIAMS : ANDREW HAY, "Fairbourne," Marple, Cheshire.
WILLIAMS : HERBERT JOHN, 35 Langdon Park Road, Highgate, N.6.
WILLIAMS : THOMAS DENBY, 110 Salt Street, Manningham, Bradford.
WOODS : ALAN, 365 Cowley Road, Oxford.
YEATS : GEORGE REGINALD, 9 Colet Gardens, Kensington, W.14.

R.I.B.A. PROBATIONERS

During the month of January 1936 the following were enrolled as Probationers of the Royal Institute :—

BELL : JAMES BEATTIE, 28 Buccleuch Place, Edinburgh.
BLYTH : EDWARD JAMES, 40 Grosvenor Road, Orpington, Kent.
BRADLEY : KENNETH EATON, 51 Merseybank Avenue, Chorlton-cum-Hardy, Manchester.
DEAKIN : FRANK, 10 Clifton Road, Heaton Moor, Stockport.
DODD : GEOFFREY BRETON DAVENPORT, "Braunton," Bakers Lane, Churchtown, Southport.
GADSDEN : JOHN EDWARDS, 39 Culver Road, Reading, Berkshire.
HARDIMAN : ARTHUR JOHN, 7 Mont-le-Grand, Exeter, Devon.
HICKS : GLANVILLE, 81 Abingdon Road, Kensington, W.8.
HILL : ERNEST ARTHUR, 77 Clarence Road, Clapham Park, S.W.4.
HIRST : JOHN SIMPSON, 2 Canonbury Park North, London, N.1.
HOLLAND : WILLIAM FISHLEY, The Pottery, Clevedon, Somerset.
HOYLE : PERCY, 103 Thicketford Road, Bolton.
JENKINS : THOMAS WILLIAM, 71 Greenhill Road, Handsworth, Birmingham, 21.
LOBBAN : (MISS) ELIZABETH MARGARET KATHERINE, 8 The Vale, London, N.W.11.
LOWE : CECIL WILLIAM, 198 Elmhurst Mansions, Edgeley Road, S.W.4.
MCDOWALL : ROBERT WILLIAM, 37 Bridge Street, Cambridge.
MACPHEE : IAN MALCOLM, 42 Azalea Road, Blackburn, Lancs.
MARETT : WILFRED, "Estoril" Private Hotel, Morral Road, Penzance.
MILLARD : ARTHUR VERNON, 39 Yarlside Road, Barrow-in-Furness, Lancs.
MOORE : ROBERT ISAAC, 2 Childeric Road, New Cross, S.E.14.
MUNDEN : NORMAN JAMES, Bridge Road, Cranleigh, Surrey.
MURRAY : FRANCIS, c/o Melville, 5 Duke Street, Edinburgh.
NICHOLSON : LAURENCE ERNEST, 76 Western Avenue, East Acton, London, W.3.
NORTON : CHARLES ALFRED ROGER, 14 Coombe Gardens, Wimbledon, S.W.20.
OSGOOD : FREDERICK FARRAR, 299 Whitehorse Lane, South Norwood, S.E.25.
PATERSON : ANDREW WALKER, 79 Oswald Road, Ayr, Scotland.
PHARE : DENIS EDGAR, Station House, Colyton, Devon.
RIORDAN : Thomas Denis, 120 Eglantine Avenue, Belfast.
RUE : NORMAN DE LA, SARNIA, Howell Road, Exeter.
SAWYER : PETER ROSS, "Ardath," Easton, Nr. Winchester, Hants.
SCHOLES : JAMES DENNIS, 296 Hyde Road, Denton, Lancs.
SMITH : The Hon. KATHLEEN WHALLEY, Queen's Lodge, Colwyn Bay.
THOMAS : ANTHONY EDWARD, 1 King Street, Port Talbot, Glam.
THOMPSON : GEORGE PHILIP ANTHONY, 36 Bedford Square, W.C.1.
WATSON : CLARENCE LONSDALE, 7 The Bank, Barnard Castle, Co. Durham.
WEALTHALL : ROY, School House, Grange Lane, New Rossington, Doncaster.
WEBBER : THOMAS FRANK, 27 North Street, Exeter.
WHITEHOUSE : JOSEPH DEREK, Westfield, Chapel Road, Alderley Edge, Nr. Manchester.
WIDDUP : FRANK MACFARLANE, "Lansdowne," Coates, Barnoldswick, via Colne.
WILLIAMS : HUGH OWEN, Cosbord House, Beulah Road, Rhiwbina, Cardiff.
WOLFE : (MISS) ANNE HILDA, 57 Deansway, N.2.
WOLLERTON : JOHN, 4 Endcliffe Rise Road, Sheffield, 11

Notices

THE FIFTH GENERAL MEETING, MONDAY, 24 FEBRUARY 1936, AT 8 P.M.

The Fifth General Meeting of the Session 1935-36 will be held at 8 p.m. on Monday, 24 February 1936, for the following purposes :—

To read the Minutes of the Fourth General Meeting held on Monday, 27 January 1936 ; formally to admit members attending for the first time since their election.

To read the following paper : "Sculpture," by Mr. Frank Dobson.

THE NEXT "SOCIAL EVENING" AND THE "EXHIBITION OF EVERYDAY THINGS"

The next social evening, announced in the R.I.B.A. *Kalendar* to take place on Monday, 10 February 1936, has been postponed until Monday, 2 March 1936. The evening will take the form of a soirée, which will be opened at 8.30 p.m. by a short talk by Mr. R. A. Duncan [*A.*] on the Exhibition of Everyday Things, followed by light refreshments and a view of the Exhibition.

Mr. L. H. Bucknell [*F.*], General Organiser of the Exhibition and Vice-Chairman of the Social Committee, will be in the Chair.

There will be no charge for admission and members are invited to bring guests.

THE SIXTH GENERAL MEETING, MONDAY, 9 MARCH 1936, AT 8 P.M.

The Sixth General Meeting of the Session 1935-36 will be held at 8 p.m. on Monday, 9 March 1936, for the following purposes :—

To read the Minutes of the Fifth General Meeting held on 24 February 1936 ; formally to admit members attending for the first time since their election.

To read the following paper : "Some Recent Bridges," by Mr. H. Chalton Bradshaw, C.B.E. [*F.*].

The portrait of Sir Ian MacAlister, M.A.(Oxon), Secretary R.I.B.A., painted by Mr. Harold Knight, A.R.A., will be unveiled at this meeting.

INFORMAL GENERAL MEETING, WEDNESDAY, 11 MARCH 1936

The Fourth Informal General Meeting will be held on Wednesday, 11 March 1936, at 6.15 p.m.

Full details will be published in the next issue of the JOURNAL.

R.I.B.A. ANNUAL DINNER.

The Council have decided that, owing to the lamented death of His Majesty King George V, the Annual Dinner which was to have been held on Monday, 3 February, will not be held this session.

EXHIBITION OF EVERYDAY THINGS

The Exhibition of Everyday Things will remain open daily in the R.I.B.A. Henry L. Florence Hall and the Reception Room until Saturday, 14 March inclusive (Sundays excepted), between the hours of 10 a.m. and 8 p.m., Saturdays 10 a.m. and 5 p.m. Admission is free.

SPECIFICATIONS PREPARED BY QUANTITY SURVEYORS

The representatives of the Chartered Surveyors' Institution on the Joint Committee of Architects and Quantity Surveyors have drawn the attention of the Joint Committee to the practice of the quantity surveyor preparing the detailed specification instead of the architect doing so.

It is pointed out that while senior quantity surveyors in many cases are not only prepared but prefer to write the detailed specification for the larger job—the architect supplying the necessary heads—it is rather unfair to expect the younger members of the quantity surveying profession to prepare specifications for small jobs without additional fee. In fact, they cannot afford to do so.

The Joint Committee referred the matter to the Practice Standing Committee, who wish to point out to members that it is one of the architect's duties under the Scale of Charges to prepare the detailed specification and that if he arranges with the quantity surveyor to do this work for him he must be prepared to reimburse the quantity surveyor accordingly.

ASSOCIATES AND THE FELLOWSHIP

Associates who are eligible and desirous of transferring to the Fellowship are reminded that if they wish to take advantage of the election to take place on 11 May 1936 they should send the necessary nomination forms to the Secretary R.I.B.A. not later than Saturday, 14 March 1936.

LICENTIATES AND THE FELLOWSHIP

The attention of Licentiates is called to the provisions of Section IV, Clause 4 (*b*) and (*cii*), of the Supplemental Charter of 1925. Licentiates who are eligible and desirous of transferring to the Fellowship can obtain full particulars on application to the Secretary R.I.B.A., stating the clause under which they propose to apply for nomination.

BRITISH ARCHITECTS' CONFERENCE, SOUTHAMPTON, 24-27 JUNE 1936

The Annual Conference of the Royal Institute of British Architects and of its Allied and Associated Societies will take place at Southampton from 24 to 27 June 1936.

The Hampshire and Isle of Wight Architectural Association have in hand the preparation of a most attractive programme and particulars will be issued in due course.

R.I.B.A. ANNUAL RECEPTION

The Council have decided to hold a Reception at the R.I.B.A. on Wednesday, 20 May 1936, from 9 p.m. to 12 p.m. Further details will be published in due course.

THE USE OF THE TITLES "CHARTERED ARCHITECT" AND "REGISTERED ARCHITECT"

Now that the Registration Act is in force the Council have been asked to give advice with regard to the best way to use the title "Registered Architect" by members of the R.I.B.A. who have been placed on the Register, and who already have the right to use the designation "Chartered Architect."

The Council recommend that members of the R.I.B.A. who have been registered should use the designation "Chartered and Registered Architect."

THE NATIONAL ASSOCIATION OF WATER USERS

Members are reminded that the National Association of Water Users, on which the R.I.B.A. is represented, exists for the purpose of protecting the interests of consumers.

Members who experience difficulties with water companies, etc., in connection with fittings are recommended to seek the advice of the Association. The address of the Association is 46 Cannon Street, London, E.C.4.

DISCIPLINARY ACTIOM

Mr. Travers Pickmere, of "The Spinney," Moss Lane, Ashton-on-Mersey, Cheshire, an Associate, was reprimanded by decree of the Council dated 10 February 1936 made pursuant to the Bye-laws.

Messrs. G. L. T. Sharp and C. J. Thompson, of 626 West Pender Street, Vancouver, British Columbia, Associates, were reprimanded by decree of the Council dated 10 February 1936 made pursuant to the Bye-laws.

Competitions

The Council and Competitions Committee wish to remind members and members of Allied Societies that it is their duty to refuse to take part in competitions unless the conditions are in conformity with the R.I.B.A. Regulations for the Conduct of Architectural Competitions and have been approved by the Institute.

While, in the case of small limited private competitions, modifications of the R.I.B.A. Regulations may be approved, it is the duty of members who are asked to take part in a limited competition to notify the Secretary of the R.I.B.A. immediately, submitting particulars of the competition. This requirement now forms part of the Code of Professional Practice in which it is ruled that a formal invitation to two or more architects to prepare designs in competition for the same project is deemed a limited competition.

BIRMINGHAM: NEW CENTRAL TECHNICAL COLLEGE, ETC.

The Corporation of the City of Birmingham are to hold a competition for a new Central Technical College, Commercial College and School of Arts and Crafts. Mr. J. R. Adamson [*F.*] has been appointed to act as Assessor and the premiums to be offered will be £750, £500 and £250. Conditions will be issued in the near future.

BIRMINGHAM: NEW SUB-FIRE STATION

The City of Birmingham Watch Committee are to hold a competition, open to architects of British nationality and practising in the City of Birmingham, for a new Sub-Fire Station at Erdington. Major T. Cecil Howitt, D.S.O. [*F.*], has been appointed to act as Assessor, and the premiums to be offered will be £100 and £50. Conditions will be available in due course.

DUNDEE: COLLEGE OF ART

The Dundee Institute of Art and Technology are to hold a competition for the Duncan of Jordanstone College of Art and Mr. J. R. Leathart [*F.*], has been appointed to act as Assessor. Conditions are not yet available.

EDMONTON: NEW TOWN HALL BUILDINGS

The Edmonton Urban District Council are proposing to hold a competition for new Town Hall Buildings, and Mr. E. Berry Webber [*A.*] has been appointed to act as Assessor. No conditions are available yet.

FARNHAM, SURREY: NEW COUNCIL OFFICES

The Farnham Urban District are proposing to hold a competition for new Council Offices and Mr. E. Vincent Harris, O.B.E. [*F.*], has been appointed to act as Assessor. No conditions are available yet.

FOLKESTONE: PUBLIC ELEMENTARY SCHOOLS

The Folkestone Borough Education Committee are proposing to hold an open competition for new Public Elementary Schools and Mr. Verner O. Rees [F.] has been appointed to act as Assessor. Conditions are not yet available.

GLAMORGAN: NEW PUBLIC HEALTH HOSPITAL

The Glamorgan County Council invite architects of British nationality to submit in competition designs for a new Public Health Hospital to be erected at Church Village, near Pontypridd, Glamorgan.

Assessors: Mr. E. Stanley Hall, Vice-President R.I.B.A.
Mr. W. James Nash [*F.*].

Premiums: £500, £300 and £150.

Last day for receiving designs: 29 May 1936.

Last day for questions: 28 February 1936.

Conditions of the competition may be obtained from Mr. Henry Rowland, Clerk of the Glamorgan County Council, Glamorgan County Hall, Cardiff. Deposit £1 1s.

HARPENDEN: NEW PUBLIC HALL

The Harpenden Urban District Council invite architects of British nationality and domiciled in the United Kingdom to submit in competition designs for a new Public Hall.

Assessor: Mr. Robert Lowry [*F.*].

Premiums: £100, £75 and £50.

Last day for receiving designs: 1 March 1936.

Last day for questions: 31 December 1935.

LUTON: NEW SECONDARY SCHOOL

The Bedfordshire County Council are proposing to hold an open competition for a new Secondary School for Boys at Luton, and Professor W. G. Newton [*F.*] has been appointed to act as Assessor. No conditions are available yet.

NEWCASTLE-UNDER-LYME: BLOCK OF SHOPS AND OFFICES

The Borough of Newcastle-under-Lyme are proposing to hold a competition for a new Block of Shops and Offices, and Mr. H. S. Fairhurst [*F.*], of Manchester, has been appointed to act as Assessor. No conditions are available yet.

SOUTHPORT: NEW CIVIC BUILDINGS

The Southport Town Council invite architects of British nationality to submit, in competition, designs for new civic buildings, comprising police headquarters, fire station, courts, etc., on the "Woodlands" site.

Assessor: Mr. E. Vincent Harris, O.B.E. [*F.*].

Premiums: £300, £200 and £100.

The last day for receiving designs has been extended to 31 March 1936.

Last day for questions: 1 January 1936.

Conditions of the competition may be obtained on application to Mr. R. Edgar Perrins, Town Clerk, Town Hall, Southport. Deposit £1 1s.

COMPETITION FOR JOINT RAILWAY RECEIVING OFFICES IN LONDON

The four main railway companies (L.N.E.R., L.M.S., G.W.R. and Southern) are proposing to hold a competition for a design for Standard Joint Railway Receiving Offices in London, and the following have been appointed to act as Assessors: Mr. L. H. Bucknell [*F.*], Mr. C. Grasemann, Mr. W. H. Hamlyn [*F.*], Mr. Charles Holden [*F.*], Vice-President, R.I.B.A. No conditions are available yet.

CARPET DESIGN COMPETITION

The *Furnishing Trades' Organiser* is promoting a competition for designs for five types of carpet, with two prizes in each class of £5 and £2 10s. There is also a special prize of £2 10s. for the best design submitted by a student aged 18 or under. Students of recognised Schools of Art or Technology in the British Isles are eligible to compete. Full conditions of the competition are published in the *Furnishing Trades' Organiser* for January 1936. The closing date for entries is 31 March 1936.

GRANITE COMPETITION: ENTRANCE TO A TUNNEL

The Architectural Association are organising a competition for the Cornish Quarry Masters' Association for a design for An Entrance to a Tunnel carried out in granite.

Assessors: The Hon. H. A. Pakington [*F.*].
Mr. C. Lovett Gill [*F.*].
Mr. H. S. Goodhart-Rendel [*F.*].
Mr. M. L. Wetherall (representing the Cornish Quarry Masters' Association).

Premiums: £25, £15 and £10.

Last day for submitting designs: 6 April 1936.

Conditions of the competition may be obtained on application to the General Secretary, Architectural Association, 34-36, Bedford Square, London, W.C.1.

COMPETITION RESULTS

COLCHESTER: NEW PUBLIC LIBRARY

1. Mr. Marshall Sisson [*A.*] (Dedham, Essex).
2. Messrs. J. H. Parker [*A.*] and S. J. Marshall (Barnet).
3. Messrs. James Saunders [*A.*] and W. H. Saunders (Westcliff-on-Sea).

ROTHESAY: NEW MUNICIPAL PAVILION

1. Messrs. J. & J. A. Carrick [*L.*, *A.*] (Ayr).
2. Messrs. Charles E. Tweedie & Sons (Edinburgh).
3. Messrs. J. W. Weddell [*L.*] and Inglis (Glasgow).

Members' Column

Owing to limitation of space, notices in this column are restricted to changes of address, partnerships vacant or wanted, practices for sale or wanted, office accommodation, and appointments vacant. Members are reminded that a column in the Advertisement Section of the Journal is reserved for the advertisements of members seeking appointments in architects' offices. No charge is made for such insertions and the privilege is confined to members who are definitely unemployed.

ASSISTANT REQUIRED

ELDERLY Architect in South Midlands Industrial District requires Assistant (about 30) possessing good social and technical qualifications and with experience in school work, with a view to acquiring a £500 share of a practice of old standing after six months' trial on small salary, and total acquisition within a few years. Reply, in confidence, and in detail, to Box No. 5635, c/o Secretary R.I.B.A.

PARTNERSHIP WANTED

A.R.I.B.A., with 15 years' experience, particularly in domestic work, seeks partnership in an established practice with an office in London. Some capital available.—Apply Box No. 1026, c/o Secretary R.I.B.A.

FURNISHED ROOM TO LET

BLOOMSBURY SQUARE. Room 14 ft. by 12 ft. 6 in., to let furnished, £52 per annum, inclusive of light, heating and cleaning. Secretarial assistance by arrangement.—Box No. 1226, c/o Secretary R.I.B.A.

DRAWING TABLE WANTED

WANTED, Architect's Drawing Table, second-hand.—Particulars to Box No. 1516, c/o Secretary R.I.B.A.

NEW APPOINTMENT

MR. RALPH HENRY CLAY [*A.*], has been appointed Assistant Architect to the Somerset County Council and will take up his duties at the end of March 1936.

NEW PRACTICE

MR. JOHN ANNESLEY BROWNRIGG [*A.*] has started in practice at 9 High Street, Guildford (Tel.: Guildford 1663), and will be pleased to receive the usual trade catalogues, etc.

NEW OFFICE: TRADE CATALOGUES, ETC., WANTED

MR. FRANK H. HEAVEN [*A.*], P.A.S.I., having been appointed to the new position of architect to the Education Committee for the Borough of Walthamstow, London, with an office at the "Old Monoux Buildings," High Street, Walthamstow, E.17, will be pleased to receive representatives, manufacturers' catalogues and particulars of materials, etc., at that address.

PRACTICE IN HAMPSHIRE

MR. MORLEY HORDER desires his old clients and friends to know that he still practises, and that his address is East Meon, Hants.

CHANGES OF ADDRESS

MR. HAROLD W. MOORE [*A.*] has moved to No. 84 Hindes Road, Harrow.

MR. E. H. ASHBURNER [*A.*] is no longer at the City Architect's Department, Sheffield. His address now is 26 Ramsden Street, Huddersfield.

CAPTAIN F. ARNOLD PERREN [*F.*] has removed his address to 54 Hawley Square, Margate, where he would be glad to receive trade catalogues.

C. W. GLOVER & PARTNERS have removed from Abbey House, Victoria Street, S.W.1, to Shell-Mex House, Victoria Embankment, W.C.2. New Telephone No.: Temple Bar 4053 and 4054.

MR. E. J. HINDSLEY [*L.*] has moved his office from No. 2 Featherstone Buildings, W.C.1, to No. 44 Royal Crescent, Holland Park Avenue, W.11. Telephone number: Park 7511-2.

ERNEST SEEL [*A.*], Dip. Arch. (Leeds), has moved his London address to "Ebor," Chestnut Drive, Harrow Weald, Middlesex, and would be glad to receive there trade circulars, etc.

NEW PARTNERSHIP

MR. DAVID GODDARD [*A.*] and Mr. C. J. E. Marshall [*A.*] have entered into partnership and are practising at 7 Southampton Street, London, W.C.1, under the name of Praxis Architects. Telephone number: Holborn 9996.

Miss M. J. Blanco White is in collaboration with Messrs. Praxis at the same address.

Mr. David Goddard is also acting as advisory architect to Messrs. Consultants, Ltd., at 200 High Holborn on all matters relating to industrial design. Telephone number: Holborn 4853.

NEW PARTNERSHIP AND NEW OFFICE.

MESSRS. J. STANLEY BEARD AND BENNETT, of 101-103, Baker Street, W.1, have opened an office in Coleridge Chambers, 177 Corporation Street, Birmingham. They have taken into partnership MR. J. B. COOPER [*A.*] and the Birmingham firm will be known as Messrs. Beard, Bennett and Cooper. They will be glad to receive trade catalogues at the Birmingham address.

Architects' and Surveyors' Approved Society

ARCHITECTS' ASSISTANTS' INSURANCE FOR THE NATIONAL HEALTH AND PENSIONS ACTS

Architects' Assistants are advised to apply for the prospectus of the Architects' and Surveyors' Approved Society, which may be obtained from the Secretary of the Society, 26 Buckingham Gate, London, S.W.1.

The Society deals with questions of insurability for the National Health and Pensions Acts (for England) under which, in general, those employed at remuneration not exceeding £250 per annum are compulsorily insurable.

In addition to the usual sickness, disablement, and maternity benefits, the Society makes grants towards the cost of dental or optical treatment (including provision of spectacles).

No membership fee is payable beyond the normal Health and Pensions Insurance contribution.

The R.I.B.A. has representatives on the Committee of Management, and insured Assistants joining the Society can rely on prompt and sympathetic settlement of claims.

A.B.S. Insurance Department

PENSION AND FAMILY PROVISION SCHEME FOR ARCHITECTS

This scheme has been formulated by the Insurance Committee of the Architects' Benevolent Society and is available to all members of the R.I.B.A. and its Allied and Associated Societies.

The benefits under the scheme include :—

(1) A Member's Pension, which may be effected for units of £50 per annum, payable monthly and commencing on attainment of the anniversary of entry nearest to age 65. This pension is guaranteed over a minimum period of five years and payable thereafter for the remainder of life.

(2) The Beneficiary's Pension, payable as from the anniversary mentioned in Benefit No. 1, but to the widow (or other nominated beneficiary) if the member dies before age 65. The amount of this pension is adjusted in accordance with the disparity between the ages of the member and his wife.

(3) Family Provision. Under this benefit a payment of £50 yearly is made to the dependent from the date of death of the member prior to age 65 until attainment of the anniversary previously mentioned, after which benefit No. 2 becomes available.

Provision can be made for any number of units (of £50 per annum) up to a maximum of £500 per annum.

Pension benefit only may be secured if desired and the pension commuted for a cash sum.

Members are entitled to claim rebate of Income Tax on their periodical contributions to the scheme both in respect of pension and of family provision benefit.

Full particulars of the scheme will be sent on application to the Secretary, A.B.S. Insurance Department, 66 Portland Place, W.1.

It is desired to point out that the opinions of writers of articles and letters which appear in the R.I.B.A. JOURNAL must be taken as the individual opinions of their authors and not as representative expressions of the Institute.

Members sending remittances by postal order for subscriptions or Institute publications are warned of the necessity of complying with Post Office Regulations with regard to this method of payment. Postal orders should be made payable to the Secretary R.I.B.A., and crossed.

R.I.B.A. JOURNAL

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